

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Jeff EDER

Serial No.: 09/940,450

Filed: August 29, 2001

For: An automated method of and system for identifying measuring and enhancing categories of value for a value chain

Group Art Unit: 3692

Examiner: J. Liversedge

**Brief on Appeal**

Sir or Madam:

The Appellant respectfully appeals the rejection of claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 52, claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149, claim 150, claim 151, claim 152, claim 153, claim 154, claim 155, claim 156, claim 157, claim 158, claim 159, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167 in the March 6, 2009 Office Action for the above referenced application. The Table of Contents is on page 2 of this paper.

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## **1. Real party in interest**

Asset Reliance, Inc. (dba Asset Trust, Inc.) is the Appellant and the owner of 100% interest in the above referenced patent application.

## **2. Related appeals**

An Appeal for U.S. Patent Application 09/764,068 filed on January 19, 2001 may be affected by or have a bearing on this appeal. An Appeal for U.S. Patent Application 10/166,758 filed on June 12, 2002 may be affected by or have a bearing on this appeal.

## **3. Status of Claims**

Claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 52, claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149, claim 150, claim 151, claim 152, claim 153, claim 154, claim 155, claim 156, claim 157, claim 158, claim 159, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167 are rejected and are the subject of this appeal. Claims 1 – 33, 53 – 61, 65 – 67, 71 – 89, and 92 – 133 are cancelled.

## **4. Status of Amendments**

There are no amendments pending.

## **5. Summary of Claimed Subject Matter**

One embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain according to the present invention is best depicted in Figures 1 – 10 of the specification for the instant application. Figure 1 gives an overview of the major processing steps which include integrating data from a plurality of database management systems for use in analysis, analyzing the data as required to develop a model of financial performance by element and category of value, identify and analyze value improvements and produce reports.

**Independent claim 34** – One embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain is exemplified in independent claim 34 where an article of manufacture instructs a computer system to implement a process obtains data from a plurality of systems and uses xml and a common schema to

transform said data into an integrated database. The output of the process is an integrated database. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110 – 118, 120 – 128 and 130 – 138 and line 16, page 15 through line 4, page 17 of the specification.

a) *integrating data from a plurality of systems using xml and a common schema as required to transform said data into an integrated database and output said database* - the process of integrating data and outputting a database is described in FIG. 5A reference numbers 202, 203, 207, 208, 209 and 211, FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211, FIG 5C, reference numbers 241, 242, 209 and 211; FIG 5D, reference numbers 261, 262, 266, 267, 268 and 269, 209 and 211, FIG. 5E, reference numbers 277, 278, 279, 280, 281 and 282 line 16, page 27; through line 9, page 37 and line 19, page 37 through line 33, page 41 of the specification;

Claim 35 – The limitations associated with dependent claim 35 are found a number of places including Table 15, page 27 and pages 2 through 7 of the specification.

Claim 36 – The limitations associated with dependent claim 36 are found in a number of places including lines 2 through 5, page 2, lines 19 through 23 and Table 16 on page 29 of the specification.

Claim 37 – The limitations associated with dependent claim 37 are found in a number of places including line 8, page 29 of the specification.

Claim 38 – The limitations associated with dependent claim 38 are found in a number of places including line 8, page 29 of the specification.

Claim 39 – The limitations associated with dependent claim 39 are found in a number of places including line 1, page 29 through line 6, page 30 of the specification, the development and use of a common data dictionary to support data extraction, conversion and storage are also described in line 40, column 35 through line 15, column 38 of cross referenced U.S. Patent 5,615,109.

Claim 40 – The limitations associated with dependent claim 40 are found in a number of places including line 1, page 29 through line 6, page 30 of the specification.

Claim 41 – The limitations associated with dependent claim 41 are found in a number of places including FIG. 1 reference numbers 5, 10, 15, 30 and 35 FIG 5A, reference numbers 207, 208, 209 and 211; FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211 FIG 5C, reference

numbers 245, 246, 209 and 211; FIG 5D, reference numbers 261, 262, 209 and 211 and line 17, page 30 through line 3, page 37 of the specification.

Claim 42 – The limitations associated with dependent claim 42 are found in a number of places including FIG. 1 reference numbers 25 and 40, FIG 5C, reference numbers 241, 242, 209 and 211, FIG 5D, reference numbers 266, 267, 268 and 269 line 7, page 34 through line 33, page 34 and line 19, page 37 through line 31, page 38 of the specification.

Claim 43 – The limitations and activities associated with dependent claim 43 are found in a number of places including FIG. 5A reference number 207 and 208 and line 20 through line 23 on page 30 of the specification.

Independent claim 44 – A second embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain is exemplified in independent claim 44 where a process uses a computer system to obtain data from a plurality of systems and then uses xml and a common schema to transform said data into an integrated database. The output of the process is an integrated database. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110 – 118, 120 – 128 and 130 – 138 and line 16, page 15 through line 4, page 17 of the specification.

a) *integrating data from a plurality of systems using xml and a common schema as required to transform said data into an integrated database that stores data in accordance with said schema and output said database* - the process of integrating data and outputting a database is described in FIG. 5A reference numbers 202, 203, 207, 208, 209 and 211, FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211, FIG 5C, reference numbers 241, 242, 209 and 211; FIG 5D, reference numbers 261, 262, 266, 267, 268 and 269, 209 and 211, FIG. 5E, reference numbers 277, 278, 279, 280, 281 and 282 line 16, page 27; through line 9, page 37 and line 19, page 37 through line 33, page 41 of the specification;

Claim 45 – The limitations associated with dependent claim 45 are found a number of places including line 8 and Table 16 on page 29 of the specification.

Claim 46 – The limitations and activities associated with dependent claim 46 are found in a number of places including lines 2 – 5, page 2, line 19 – 23 and Table 16 on page 29 of the specification.

Claim 47 – The limitations and activities associated with dependent claim 47 are found in a number of places including line 1, page 29 through line 6, page 30 of the specification, the

development and use of a common data dictionary to support data extraction, conversion and storage are also described in line 40, column 35 through line 15, column 38 of cross referenced U.S. Patent 5,615,109.

Claim 48 – The limitations associated with dependent claim 48 are found in a number of places including line 1, page 29 through line 6, page 30 of the specification.

Claim 49 – The limitations associated with dependent claim 49 are found in a number of places including FIG. 1 reference numbers 5, 10, 15, 30 and 35, FIG 5A, reference numbers 207, 208, 209 and 211; FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211 FIG 5C, reference numbers 245, 246, 209 and 211; FIG 5D, reference numbers 261, 262, 209 and 211 and line 17, page 30 through line 3, page 37 of the specification.

Claim 50 – The limitations associated with dependent claim 50 are found in a number of places including FIG. 1 reference numbers 25 and 40, FIG 5C, reference numbers 241, 242, 209 and 211, FIG 5D, reference numbers 266, 267, 268 and 269 line 7, page 34 through line 33, page 34 and line 19, page 37 through line 31, page 38 of the specification.

Claim 51 – The limitations and activities associated with dependent claim 51 are found in a number of places including FIG. 5A reference number 207 and 208 and line 20 – 23 on page 30 of the specification.

Claim 52 – The limitations and activities associated with dependent claim 52 were already described for claim 44.

**Independent claim 62** – A third embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain is exemplified in independent claim 62 where an article of manufacture instructs a computer system to implement a process obtains data from a plurality of systems and uses xml and a common schema to transform said data into an integrated database. The integrated data are then used to create and output tools for financial management. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110 – 118, 120 – 128 and 130 – 138 and line 16, page 15 through line 4, page 17 of the specification.

a) *transforming data representative of an organization from a plurality of systems into an integrated database that stores data in accordance with an xml metadata standard and a common schema* – the process of transforming data from a plurality of systems into an integrated database is described in FIG. 5A reference numbers 202, 203, 207, 208, 209 and

211, FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211, FIG 5C, reference numbers 241, 242, 209 and 211; FIG 5D, reference numbers 261, 262, 266, 267, 268 and 269, 209 and 211, FIG. 5E, reference numbers 277, 278, 279, 280, 281 and 282 line 16, page 27; through line 9, page 37 and line 19, page 37 through line 33, page 41 of the specification.

*b) using at least a portion of said data to create and output one or more tools for organization management where the one or more tools for organization management further comprise a system for automated trading of an organization equity security based on a calculated market sentiment value and one or more tools selected from the group consisting of analytical models, category of value models, component of value models, market value models, network models, optimization models, simulation models, value chain models, management reports, lists of changes that will optimize one or more aspects of organization financial performance and combinations thereof – the integrated data are then analyzed in order to develop component of value models and category of value models that comprise a market value model for the value chain and each enterprise in a value chain as described in FIG. 1, reference numbers 300 and 400, FIG. 6A reference number 302, 303, 304, 305, 306, 307, 308, 309 and 310, FIG. 6B reference numbers 321, 323, 326, 327, 328 and 329, FIG. 6C reference numbers 341, 342, 343, 345, 346, 347, 348, 349 and 350, FIG. 7 reference numbers 404, 404, 409, 410, 411, 412, 413, 414 and 415 and line 1, page 44 through line 18, page 65 of the specification. Calculated market sentiment values that were developed during model creation are then used to support the automated trading of organization equity as described in FIG. 8 reference numbers 509, 510, 511 and 512 and line 20 page 69 and line 18, page 70 of the specification. The market value models can be used to develop management reports as described in FIG. 8 reference numbers 504, 505, 506 and 507 and line 20, page 65 through line 18, page 69 of the specification. The market value models can also be used for simulation and/or optimization as described in FIG. 9 reference number 603, 604, 605 and 610 and lines 20, page 71 through line 17, page 73 of the specification. The results of the analyses include a list of changes that will optimize one or more aspects of organization financial performance. The results of these analyses are then reported using the method described in FIG. 9 reference number 611 and 612 and line 20, page 73 through line 30, page 73 of the specification.*

Claim 63 – The limitations associated with dependent claim 63 are found in a number of places including line 9 through 13, page 73 of the specification.

Claim 64 – The limitations associated with dependent claim 64 are found in a number of places including FIG. 1 reference numbers 5, 10, 15, 30 and 35 FIG 5A, reference numbers 207, 208,

209 and 211; FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211 FIG 5C, reference numbers 245, 246, 209 and 211; FIG 5D, reference numbers 261, 262, 209 and 211 and line 17, page 30 through line 3, page 37 of the specification.

Claim 68 – The limitations associated with dependent claim 68 are found in a number of places including line 1, page 29 through line 6, page 30 of the specification, the development and use of a common data dictionary to support data extraction, conversion and storage are also described in line 40, column 35 through line 15, column 38 of cross referenced U.S. Patent 5,615,109.

Claim 69 – The limitations associated with dependent claim 69 are found in a number of places including line 1, page 29 through line 6, page 30 of the specification.

Claim 70 – The limitations associated with dependent claim 70 are found in a number of places including line 8, page 29 of the specification.

Claim 90 – The limitations associated with dependent claim 90 are found in a number of places including table 3, page 10.

Claim 91 – The limitations associated with dependent claim 91 are found in a number of places including table 3, page 10.

Claim 134 – The limitations and activities associated with dependent claim 134 are found in a number of places including FIG. 6A, 6B and 6C and pages 50 – 78 of the specification.

**Independent claim 135** – A fourth embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain is exemplified in independent claim 135 where a computer system obtains data from a plurality of systems and then uses xml and a common schema to transform said data into an integrated database. The output of the process is an integrated database. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

a) *a computer with a processor having circuitry to execute instructions; a storage device available to said processor with sequences of instructions stored therein, which when executed cause the processor to integrate a plurality of data representative of an organization that physically exists from a plurality of organization related systems and an Internet using xml and a common schema as required to transform said data into an integrated database that stores data in accordance with said schema and output said database* – the computer is described in FIG. 3, reference numbers 120 – 128 and line 16, page 15 through line 4, page 17 of the specification. The process of using the computer to transform data from a plurality of

organization related systems into an integrated database is described in FIG. 5A reference numbers 202, 203, 207, 208, 209 and 211, FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211, FIG 5C, reference numbers 241, 242, 209 and 211; FIG 5D, reference numbers 261, 262, 266, 267, 268 and 269, 209 and 211, FIG. 5E, reference numbers 277, 278, 279, 280, 281 and 282 line 16, page 27; through line 9, page 37 and line 19, page 37 through line 33, page 41 of the specification.

Claim 136 – The limitations associated with dependent claim 136 are found in a number of places including

Claim 137 – The limitations associated with dependent claim 137 are found in a number of places including line 1, page 29 through line 6, page 30 of the specification, the development and use of a common data dictionary to support data extraction, conversion and storage are also described in line 40, column 35 through line 15, column 38 of cross referenced U.S. Patent 5,615,109.

Claim 138 – The limitations associated with dependent claim 138 are found in a number of places including lines 2 through 5, page 2, lines 19 through 23 and Table 16 on page 29 of the specification.

Claim 139 – The limitations associated with dependent claim 139 are found in a number of places including line 1, page 29 through line 6, page 30 of the specification.

Claim 140 – The limitations associated with dependent claim 140 are found in a number of places including FIG. 1 reference numbers 5, 10, 15, 30 and 35 FIG 5A, reference numbers 207, 208, 209 and 211; FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211 FIG 5C, reference numbers 245, 246, 209 and 211; FIG 5D, reference numbers 261, 262, 209 and 211 and line 17, page 30 through line 3, page 37 of the specification.

Independent claim 141 – A fifth embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain is exemplified in independent claim 141 where an article of manufacture instructs a computer system to implement a process obtains data from a plurality of systems and uses xml and a common schema to transform said data into an integrated database. The output of the process is an integrated database. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110 – 118, 120 – 128 and 130 – 138 and line 16, page 15 through line 4, page 17 of the specification.

a) *use metadata mapping to integrate a plurality of data representative of a physical object or substance from a plurality of systems in accordance with xml and a common schema to transform said data into an integrated database that stores data in accordance with said schema and output said database* - the process of using metadata mapping to integrate data and output a database is described in FIG. 5A reference numbers 202, 203, 207, 208, 209 and 211, FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211, FIG 5C, reference numbers 241, 242, 209 and 211; FIG 5D, reference numbers 261, 262, 266, 267, 268 and 269, 209 and 211, FIG. 5E, reference numbers 277, 278, 279, 280, 281 and 282 line 16, page 27; through line 9, page 37 and line 19, page 37 through line 33, page 41 of the specification;

Claim 142 – The limitations associated with dependent claim 144 are found in a number of places including.

Claim 143 – The limitations associated with dependent claim 143 are found in a number of places including line 8, page 29 of the specification.

Claim 144 – The limitations associated with dependent claim 144 are found in a number of places including.

**Independent claim 145** – A sixth embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain is exemplified in independent claim 145 where a process uses a computer system to obtain data from a plurality of systems and then uses xml and a common schema to transform said data into an integrated database. The output of the process is an integrated database. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110 – 118, 120 – 128 and 130 – 138 and line 16, page 15 through line 4, page 17 of the specification.

a) *using metadata mapping to integrate a plurality of data representative of an enterprise from a plurality of enterprise related systems in accordance with xml and a common schema as required to transform said data into an integrated database that stores data using one or more schema defined categories in accordance with said schema and output said database* - the process of using metadata mapping to integrate data and output a database is described in FIG. 5A reference numbers 202, 203, 207, 208, 209 and 211, FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211, FIG 5C, reference numbers 241, 242, 209 and 211; FIG 5D, reference numbers 261, 262, 266, 267, 268 and 269, 209 and 211, FIG. 5E, reference numbers 277, 278,

279, 280, 281 and 282 line 16, page 27; through line 9, page 37 and line 19, page 37 through line 33, page 41 of the specification;

Claim 146 – The limitations associated with dependent claim 146 are found in a number of places including FIG. 1 reference numbers 5, 10, 15, 30 and 35 FIG 5A, reference numbers 207, 208, 209 and 211; FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211 FIG 5C, reference numbers 245, 246, 209 and 211; FIG 5D, reference numbers 261, 262, 209 and 211 and line 17, page 30 through line 3, page 37 of the specification.

Claim 147 – The limitations associated with dependent claim 147 are found in a number of places including.

Claim 148 – The limitations associated with dependent claim 148 are found in a number of places including

Claim 149 – The limitations associated with dependent claim 149 are found in a number of places including

**Independent claim 150** – A seventh embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain is exemplified in independent claim 150 where a computer obtains data from a plurality of enterprise systems and then uses xml and a common schema to transform said data into an integrated database. The output of the process is an integrated database. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

a) *a computer with a processor having circuitry to execute instructions; a storage device available to said processor with sequences of instructions stored therein, which when executed cause the processor to use metadata mapping to integrate and convert a plurality of data from a plurality of enterprise related systems in accordance with xml and a common schema to as required to transform said data into an integrated database and output said database* – the computer is described in FIG. 3, reference numbers 120 – 128 and line 16, page 15 through line 4, page 17 of the specification. The process of using metadata mapping to integrate and convert data from a plurality of enterprise related systems into an integrated database is described in FIG. 5A reference numbers 202, 203, 207, 208, 209 and 211, FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211, FIG 5C, reference numbers 241, 242, 209 and 211; FIG 5D, reference numbers 261, 262, 266, 267, 268 and 269, 209 and 211, FIG. 5E, reference numbers 277, 278, 279, 280, 281 and 282 line 16, page 27; through line 9, page 37 and line 19, page 37 through line 33, page 41 of the specification

Claim 151 – The limitations associated with dependent claim 151 are found in a number of places including

Claim 152 – The limitations associated with dependent claim 152 are found in a number of places including

Claim 153 – The limitations associated with dependent claim 153 are found in a number of places including

Claim 154 – The limitations associated with dependent claim 154 are found in a number of places including

**Independent claim 155** – An eighth embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain is exemplified in independent claim 155 where an article of manufacture instructs a computer system to implement a process obtains data from a plurality of systems and uses xml and a common schema to transform said data into an integrated database. The output of the process is an integrated database. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110 – 118, 120 – 128 and 130 – 138 and line 16, page 15 through line 4, page 17 of the specification.

a) *use metadata mapping to integrate a plurality of data representative of a physical object or substance from a plurality of systems in accordance with xml and a common schema to transform said data into an integrated database that stores data in accordance with said schema and output said database* - the process of using metadata mapping to integrate data and output a database is described in FIG. 5A reference numbers 202, 203, 207, 208, 209 and 211, FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211, FIG 5C, reference numbers 241, 242, 209 and 211; FIG 5D, reference numbers 261, 262, 266, 267, 268 and 269, 209 and 211, FIG. 5E, reference numbers 277, 278, 279, 280, 281 and 282 line 16, page 27; through line 9, page 37 and line 19, page 37 through line 33, page 41 of the specification;

Claim 156 – The limitations associated with dependent claim 156 are found in a number of places including.

Claim 157 – The limitations associated with dependent claim 157 are found in a number of places including

Claim 158 – The limitations associated with dependent claim 158 are found in a number of

places including

**Independent claim 159** – A ninth embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain is exemplified in independent claim 159 where a process uses a computer system to obtain data from a plurality of systems and then uses xml and a common schema to transform said data into an integrated database. The output of the process is an integrated database. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110 – 118, 120 – 128 and 130 – 138 and line 16, page 15 through line 4, page 17 of the specification.

a) *using metadata mapping to integrate a plurality of data representative of an enterprise from a plurality of enterprise related systems in accordance with xml and a common schema as required to transform said data into an integrated database that stores data using one or more schema defined categories in accordance with said schema and output said database* - the process of using metadata mapping to integrate data and output a database is described in FIG. 5A reference numbers 202, 203, 207, 208, 209 and 211, FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211, FIG 5C, reference numbers 241, 242, 209 and 211; FIG 5D, reference numbers 261, 262, 266, 267, 268 and 269, 209 and 211, FIG. 5E, reference numbers 277, 278, 279, 280, 281 and 282 line 16, page 27; through line 9, page 37 and line 19, page 37 through line 33, page 41 of the specification;

**Claim 160** – The limitations associated with dependent claim 160 are found in a number of places including.

**Claim 161** – The limitations associated with dependent claim 161 are found in a number of places including

**Claim 162** – The limitations associated with dependent claim 162 are found in a number of places including

**Claim 163** – The limitations associated with dependent claim 163 are found in a number of places including

**Independent claim 164** – A tenth embodiment of an automated method of and system for identifying measuring and enhancing categories of value for a value chain is exemplified in independent claim 164 where a computer obtains data from a plurality of enterprise systems and then uses xml and a common schema to transform said data into an integrated database.

The output of the process is an integrated database. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

- a) a computer with a processor having circuitry to execute instructions; a storage device available to said processor with sequences of instructions stored therein, which when executed cause the processor to use metadata mapping to integrate and convert a plurality of data from a plurality of enterprise related systems in accordance with xml and a common schema to as required to transform said data into an integrated database and output said database – the computer is described in FIG. 3, reference numbers 120 – 128 and line 16, page 15 through line 4, page 17 of the specification. The process of using metadata mapping to integrate and convert data from a plurality of enterprise related systems into an integrated database is described in FIG. 5A reference numbers 202, 203, 207, 208, 209 and 211, FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211, FIG 5C, reference numbers 241, 242, 209 and 211; FIG 5D, reference numbers 261, 262, 266, 267, 268 and 269, 209 and 211, FIG. 5E, reference numbers 277, 278, 279, 280, 281 and 282 line 16, page 27; through line 9, page 37 and line 19, page 37 through line 33, page 41 of the specification
- b) where metadata mapping is guided by a metadata mapping table,
- c) where a metadata and conversion rules window is used to establish a metadata mapping table –
- d) where a plurality of enterprise related systems are selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, intellectual property management systems, process management systems, vendor management systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems, enterprise resource planning systems (ERP), material requirement planning systems (MRP), scheduling systems, supply chain systems, quality control systems, purchasing systems and combinations thereof – as described in FIG. 1 reference numbers 5, 10, 15, 30 and 35 FIG 5A, reference numbers 207, 208, 209 and 211; FIG 5B, reference numbers 221, 222, 225, 226, 209 and 211 FIG 5C, reference numbers 245, 246, 209 and 211; FIG 5D, reference numbers 261, 262, 209 and 211 and line 17, page 30 through line 3, page 37 of the specification.

Claim 165 – The limitations associated with dependent claim 165 are found in a number of places including.

Claim 166 – The limitations associated with dependent claim 166 are found in a number of places including

Claim 167 – The limitations associated with dependent claim 167 are found in a number of places including

**Grounds of rejection to be reviewed on appeal**

**Issue 1** – Whether claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91, claim 134, claim 148, claim 153 are obvious under 35 U.S.C. 103(a) given Davis in view of “Premium Drivers of Post Deal Value” in Mergers and Acquisitions (hereinafter, Bielinski), U.S. Patent 6,018,722 (hereinafter, Ray), “The 1986-88 Stock Market: Investor Sentiment or Fundamentals” (hereinafter, Baur) and Official Notice?

**Issue 2** – Whether claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167 are obvious under 35 U.S.C. 103(a) given Davis in view of U.S. Patent 6,549,922 (hereinafter, Srivastava) and Official Notice?

**Issue 3** – Whether claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and 154 are obvious under 35 U.S.C. 103(a) Davis in view of Official Notice?

**Issue 4** – Whether claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 145, claim 146, claim 147, claim 148, claim 149, claim 159, claim 160, claim 161, claim 162 and claim 163 represent statutory subject matter under 35 USC §101?

**Issue 5** – Whether claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 50, claim 51, claim 52, claim 135, claim 136, claim 137, claim 138, claim 141, claim 142, claim 143, claim 145 and claim 149 are anticipated under 35 USC §102(e) by U.S. Patent 7,249,328 (hereinafter Davis)?

**Issue 6** – Whether claim 34, claim 44, claim 62, claim 135, claim 136, claim 141, claim 145, claim 150, claim 155, claim 159 and claim 164 are enabled under 35 U.S.C. §112, first paragraph?

**Issue 7** – Whether claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149, claim 150, claim 151, claim 152, claim 153, claim 154, claim 155, claim 156, claim 157, claim 158, claim 159, claim 160,

claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167 are indefinite under 35 U.S.C. §112, second paragraph?

### **The Argument**

For each ground of rejection which Appellant contests herein which applies to more than one claim, such additional claims, to the extent separately identified and argued below, do not stand and fall together.

**Issue 1 – Whether claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91, claim 134, claim 148 and claim 153 are obvious under 35 U.S.C. 103(a) given Davis in view of Bielinski, Ray, Baur and/or Official Notice?**

The claims are patentable for several reasons. The primary reason is that the cited combination of documents (Bielinski, Davis, Ray, Baur and Official Notice) and the arguments related to the cited combination of documents fail to establish a prima facie case of obviousness for every rejected claim as detailed below.

**Reason #1** – The first reason that claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91, claim 134, claim 148 and claim 153 are patentable is that the cited documents fail to establish a prima facie case of obviousness because they teach away from all the claimed methods. MPEP § 2141.02 states that: *“in determining the difference between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious but whether the claimed invention as a whole would have been obvious (Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983)).”* Furthermore, it is well established that: *A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).* Examples of the cited documents teaching away from the claimed invention include:

- 1) The Bielinski and Ray references teach away from trading equity securities based on a calculated market sentiment value. Bielinski teaches and relies on the VBM method of discounted cash flow modeling. VBM uses Shareholder Value Analysis (hereinafter, SVA) principles, including the use of a single tree of equations to calculate cash flow and an enterprise value, but advances the technique by using historical data, operations linked value drivers and concurrent changes in multiple value drivers. In accordance with the VBM/SVA method, most of the tree is used for calculating the actual cash flow for prior periods. The remainder of the tree is used for determining the cost of capital used to discount the cash flow. Putting the two parts of the tree together, the VBM method

teaches that the only way to increase enterprise value is to increase the value of period cash flow. Bielinski (VBM and SVA) also relies on the standard valuation model which teaches that there is no market sentiment (see Evidence Appendix, pages 84 – 85). By way of contrast, the claimed invention teaches that as many as three categories of value determine the value of an enterprise as shown in the table below.

Categories of value per 09/940,450	Categories of value per Bielinski
1. Current operation (cash flow), 2. Market sentiment, and 3. Real options.	1. Cash flow (current operation)

Ray also teaches away from trading equity securities based on a market sentiment value by teaching a reliance on the now discredited modern portfolio theory (see Evidence Appendix, pages 86 - 87), which also teaches that there is no market sentiment (Ray, Column 2, Line 36). The Ray invention uses modern portfolio theory to determine the relative ranking of securities that should be traded to help match a subjectively determined profile established by an investor. By exclusively teaching methods that teach away from the claimed invention, Bielinski and Ray provide additional evidence of the novelty, non-obviousness and newness of claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91, claim 134, claim 148 and claim 153.

2) Davis teaches away from the claimed method of creating an integrated database. The claimed invention teaches the creation of a single, integrated database with data obtained from a plurality of sources using xml and a common schema. Davis teaches away by teaching:

- a) the storage of information that guides the conversion of data from a plurality of sources to an RDML format in an image database (226) that is separate from the source databases (230),
- b) the placement of RDML conversion information (504) in the source databases (230),
- c) the use of a common data type definition (dtd) to guide the combination of data from different systems, and
- d) that conversion information and source data should be combined in accordance with a common dtd using a viewer (100) or formatter (216) to produce documents (102) or views (108) that contain small amounts of data in an RDML format.

By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 62,

claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91, claim 134, claim 148 and claim 153.

3) Bielinski teaches away from the claimed approach to analyzing enterprise financial performance. Bielinski teaches away from the statistical modeling of enterprise financial performance by teaching the use of a single tree of equations to calculate the actual amount of enterprise cash flow and an enterprise value. As noted in Reason #5, changing this aspect of the Bielinski invention destroys its ability to function (see Evidence Appendix related appeal for 09/764,068, pages 67 – 71). Affects claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134.

4) Bielinski and Ray teach away from the claimed method of optimizing one or more aspects of an enterprise financial performance. Bielinski teaches the use of sensitivity analysis and break even analysis to identify desirable changes in operation. Bielinski also teaches away from the use of projections that are required for a future value optimization analysis by teaching a strict reliance on five years of historical cash flow. Ray teaches that an optimal portfolio is one that matches subjective preferences of the portfolio owner. By way of contrast, the claimed invention teaches and relies on the use of objective optimization analyses to identify the most desirable set of changes to optimize a future value of one or more aspects of business financial performance. Affects claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134.

5) Davis teaches away from the claimed method of storing data. The claimed invention teaches the storage of data by item in an integrated database in accordance with a common schema. Davis teaches away by teaching the storage of data by line in accordance with a common dtd (see Davis, Column 21, line 58) in RDML documents. The RDML documents are stored as a vector, hash table or dictionary (see Davis, Column 33, line 65).

6) Baur teaches away from the claimed method of analyzing of enterprise financial performance. Baur teaches away from analyzing and modeling an enterprise by category of value as it focuses exclusively on the correlation between investor sentiment and weekly price changes for the S&P 500. Share prices reflect the combined value of all categories of value in an enterprise. Baur also teaches away from analyzing and modeling an enterprise by element of value as it focuses exclusively on the correlation between investor sentiment and weekly price changes for the S&P 500 (see Evidence Appendix, pages 81 - 83). Share prices reflect the combined contribution of all the

elements of value in an enterprise. Affects claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134, claim 148 and claim 153.

7) Bielinski teaches away from the claimed method of analyzing enterprise financial performance by teaching and relying on different assumptions. Bielinski teaches the use of a single tree of equations to calculate an enterprise value and that enterprise cash flow is the sole determinant of value. Implicit in these teachings are three assumptions that teach away from the claimed method: the relationship between input values and actual cash flow is linear, there is no need to consider factors that have an indirect relationship to cash flow and the market is strong form, market efficient (aka market sentiment value is zero). Bielinski does not teach that there is more than there is any alternative to reliance on the assumptions outlined above and shown in the Table below.

Assumptions	09/940,450	Bielinski
Relationship of inputs to actual levels	None, inputs may have a linear or non-linear effect on the value of the categories of value	Inputs have a linear effect on cash flow
Inputs analyzed	Elements of value that may have a direct and/or an indirect impact on category values	Activities, counts, expenditures and summary measures that have a direct relationship to cash flow
Market efficiency	None, market may be strong form, efficient (market sentiment value is zero) or it may be inefficient (market sentiment value may be above or below zero)	Market is strong form, efficient (aka standard valuation model) and market sentiment value is zero

By way of contrast, the claimed inventions teach and rely on the fact that a model for cash flow or other categories of value can utilize a non-linear and/or an indirect relationship between input values and the actual value. In a similar fashion, the claimed invention does not make any assumptions about market efficiency (see Table). Affects claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134.

8) Davis teaches away from the claimed method of creating tools for organization management. The claimed invention teaches using independent components of application software to acquire data that has already been integrated using xml and a common schema and transform the acquired data into tools for organization management that can be viewed and used. Davis teaches away by teaching the use of a viewer (100) that relies on a tree view defined by a common data type definition (dtd) to transform, format, manipulate and display lines of data stored in the source databases into a small amount of RDML formatted data. Affects claim 62, claim 63, claim 64, claim 68, claim 69,

claim 70, claim 90, claim 91, claim 134, claim 148 and claim 153.

9) Bielinski and Ray teach away from the claimed method of analyzing and modeling enterprise financial performance by element of value. Bielinski teaches the use of a single tree of equations to calculate an enterprise value from historical cash flow. The portion of the tree used for calculating historical cash flow is built by joining together a series of nodes where the inputs to each node are mathematically combined to produce a node output that becomes an input to a node at a higher level in the tree. The inputs to the VBM cash flow tree consist of:

- activities (i.e. volume of calls received, number of transactions completed and pounds of material used),
- counts (i.e. number of service delivery centers and number of employees),
- expenditure data (i.e. material costs, employee annual salary and cost per station), and
- summary financial measures (i.e. inventory turnover ratio and sales growth rate)

These low level inputs mathematically combine to produce the summary accounting numbers used for calculating the historical cash flow. By way of contrast, the claimed invention teaches that elements of value drive current operation cash flow (and the other categories of value) and that statistical summaries of element of value performance are the only inputs to the models of each category of value – including the current operation model. Ray also teaches away from analyzing and modeling an enterprise by element of value as it teaches the analysis of securities at the item level. Because the cited documents exclusively teach methods that teach away from the claimed methods, the *prima facie* case of obviousness cannot be properly established. Affects claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134, claim 148 and claim 153.

**Reason #2** –the second reason that the cited combination of documents fails to establish a *prima facie* case of obviousness that would support the rejection of claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134, claim 148 and claim 153 is that the cited combination does not teach or suggest one or more limitation for every rejected claim. It is well established that “when determining whether a claim is obvious, an examiner must make ‘a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.’ *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995). Thus, ‘obviousness requires a suggestion of all limitations in a claim.’ CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing *In re Royka*, 490 F.2d 981, 985 (CCPA 1974)) Furthermore, the Board of Patent Appeal and Interferences recently confirmed (*In re Wada and Murphy*, Appeal

No. 2007- 3733) that a proper, post KSR obviousness determination still requires that an examiner must make “a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.” *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added). In other words, obviousness still requires a suggestion of all the limitations in a claim. Limitations not taught or suggested by the cited combination include:

Claim 62 (affects claims 63, 64, 68, 69, 70, 90, 91 and 134). Limitations not taught or suggested include:

- a) transforming data representative of an organization from a plurality of systems into an integrated database,
- b) an integrated database that stores data in accordance with an xml metadata standard and a common schema,
- c) a system for automated trading of an organization equity security based on a calculated market sentiment value, and
- d) one or more tools selected from the group consisting of analytical models, category of value models, component of value models, market value models, network models, optimization models, simulation models, value chain models, management reports, lists of changes that will optimize one or more aspects of organization financial performance and combinations thereof.

Claim 63. Limitations not taught or suggested include: where the one or more tools are made available for review using an electronic display, a paper document or combinations thereof.

Claim 64. Limitations not taught or suggested include: where the one or more tools are made available for review using an electronic display, a paper document or combinations thereof.

Claim 68. Limitations not taught or suggested include: where a common schema defines common attributes selected from the group consisting of data structure, organization designation, data dictionary and combinations thereof.

Claim 69. Limitations not taught or suggested include: where the data dictionary defines standard data attributes from the group consisting of account numbers, components of value, currencies, elements of value, organization designations, time periods and units of measure.

Claim 70. Limitations not taught or suggested include: where a common schema data

*structure is a hierarchy.*

Claim 90. Limitations not taught of suggested include: *wherein the one or more aspects of organization financial performance are selected from the group consisting of organization revenue, organization expense, organization capital change, organization current operation value, organization real option value, organization market sentiment value, organization market value and combinations thereof.*

Claim 91. Limitations not taught of suggested include: *where the identified changes are changes to alliance value drivers, brand value drivers, channel value drivers, customer value drivers, customer relationship value drivers, employee value drivers, equipment value drivers, intellectual property value drivers, partnership value drivers, process value drivers, production equipment value drivers, vendor value drivers, vendor relationship value drivers, organization equity and combinations thereof.*

Claim 134. Limitations not taught of suggested include: *a system that learns the relative importance of the different elements of value, categories of value and enterprises in determining organization financial performance as required to support the development of one or more tools for organization management.*

Claims 148 and 153. Limitations not taught of suggested include: *a common schema that identifies data designations selected from the group consisting of components of value, sub components of value, known value drivers, elements of value, sub elements of value, non-relevant attributes and combinations thereof.*

**Reason #3** – The third reason claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134, claim 148 and claim 153 are patentable is that the required modification of Bielinski would change several principles of operation of the Bielinski invention. It is well established that when “*the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)*”. Bielinski which is the primary reference for all obviousness rejections, teaches and relies on four principles of operation that would have to be changed to replicate the functionality of the claimed invention.

- 1) One principle of operation Bielinski relies on is the standard model which teaches that cash flow is the sole determinant of enterprise value. This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact

that enterprise value includes a number of categories of value (i.e. real options, market sentiment) that are not included in the standard model (see Evidence Appendix, page 85).

2) A second principle of operation that Bielinski relies on is that a single tree of equations can be used to identify the inputs that are related to the actual amount of enterprise cash flow, calculate prior period cash flow and calculate an enterprise value (see Evidence Appendix related appeal for 09/764,068, pages 67 – 71). This principle of operation would have to be changed to replicate the functionality of the claimed inventions because the claimed inventions rely on a series of multivariate statistical analyses where the only inputs are element of value impact summaries and the primary outputs are between one and zero (category valuations are determined separately). A single tree of equations cannot be used to determine the actual amount of enterprise cash flow and/or calculate an enterprise value from the inputs used in the claimed analyses and changing to a series of analyses using statistical models for identifying relative contributions and separate models for calculating segment valuations would be a change in another principle of operation of the Bielinski invention.

3) A third principle of operation that Bielinski teaches and relies on is that activities, counts, expenditures and summary measures determine cash flow and that value drivers are high level summaries of enterprise financial performance (i.e. operating profit margin). Bielinski also teaches that operational value drivers are sub-components of expense value (i.e. raw material cost, human resource cost), and/or summary financial statistics (inventory turnover and sales growth percentage). This principle of operation would have to be changed to replicate the functionality of the claimed inventions because the claimed inventions teach and rely on the fact that elements of value drive cash flow (and other segments of value) and that value drivers are characteristics of elements of value.

4) A fourth principle of operation that Bielinski teaches and relies on is that analyses of cash flow only require consideration of the factors that have a direct, linear relationship to the actual cash flow. By way of contrast, the claimed invention teaches and relies on the fact that elements of value may have an indirect and/or non linear impact on cash flow and/or a category valuation. The fourth principle of operation would have to be changed to add a consideration of the factors that have an indirect and/or non-linear relationship to cash flow to the analysis method taught by Bielinski.

Because the required modification of Bielinski would change four of its principles of operation, the *prima facie* case of obviousness cannot be properly made.

**Reason #4** – The fourth reason claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134, claim 148 and claim 153 are patentable is that the proposed theoretical combination would change the principles of operation of the inventions described in the Baur, Davis and Ray references. It is well established that when “*the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious.* *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)”. Principles of operation that would have to be changed to replicate the functionality of the claimed invention are shown in the table below. Because the required modification of Baur, Davis and Ray would change one or more of their principles of operation, the *prima facie* case of obviousness cannot be properly made.

Reference	Principle of operation	Principle change required
Baur	Investor sentiment is a factor that may have an impact on share prices	Market sentiment is a category of value with a value that is a function of element of value performance
Davis	Identify and store RDML conversion information separately from source data, combine in a viewer or formatter to produce small amounts of data with a common dtd on demand	Identify xml conversion information, integrate and store all converted source data in a single database using a common schema
Davis	Use “data field mapping” to map from source databases to an RDML document defined by a dtd	Use “metadata mapping” to map from source database metadata to integrated database metadata
Davis	Store data by line in accordance with a dtd (see Davis, Column 21, line 58)	Store data by item in accordance with a schema
Ray	Identify investment portfolios based on individual preferences and adjust said portfolios for economic environment. Rank changes to portfolio based on the now discredited modern portfolio theory (aka CAPM) which teaches that market sentiment value is zero.	Buy and sell securities based on a calculated market sentiment value.

**Reason #5** – The fifth reason claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134, claim 148 and claim 153 are patentable is that the required modification would destroy the intent, function and purpose of the Bielinski invention. It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made* (*In re Gordon* 733 F.2d 900, 221 U.S.PQ 1125 Fed Circuit 1984). The claimed

computational model of enterprise market value by element of value and category of value comprises predictive models for one or two categories of value, the current operation and/or market sentiment categories of value. Bielinski teaches and relies on a single tree of equations to identify the inputs that are related to the actual amount of enterprise cash flow, calculate the cash flow and calculate an enterprise value. Modifying the Bielinski invention to use a predictive model that completes a statistical analysis for all or part of the tree would destroy its ability to perform its intended function (see Evidence Appendix related appeal for 09/764,068, pages 67 – 71). It should be noted that if the Bielinski tree were not modified to use a predictive model, then it would not be able to replicate any of the functionality of the claimed invention. Because the required modification of Bielinski would destroy its function, the *prima facie* case of obviousness cannot be properly made.

**Reason #6** – The sixth reason claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134, claim 148 and claim 153 are patentable is that the proposed theoretical combination would destroy the intent, function and purpose of the Ray invention. It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.PQ 1125 Fed Circuit 1984)*. The function of the Ray invention is to use the now discredited modern portfolio theory (see Evidence Appendix, pages 86 - 87) to identify the best securities to add to a portfolio that is designed to satisfy the subjective goals and preferences of an investor. The investor goals and preferences are identified in a questionnaire. By way of contrast, the claimed invention trades securities solely on the basis of a calculated market sentiment value. Modifying the Ray invention to replicate the functionality of the claimed invention would destroy its ability to perform its intended function and purpose. Because the required modification of the Ray invention would destroy its intended function and purpose, the *prima facie* case of obviousness cannot be properly made.

**Reason #7** – The seventh reason claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134, claim 148 and claim 153 are patentable is that the proposed theoretical combination would destroy the intent, function and purpose of the Davis invention. It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.PQ 1125 Fed Circuit 1984)*. The function of the Davis invention is to use common dtd to organize, manipulate

and present data in a graph or table by line (Davis, Column 21, Line 58). In accordance with the Davis invention, the data that will analyzed and/or presented in a graph or table must be known before the data from different sources can be combined. By way of contrast, the system of the present invention stores data in accordance with a common schema and determines which data are to be analyzed or presented in a graph or table only after a series of analyses that rely on data in the integrated database have been completed. In accordance with the claimed invention, the data that will be included in an analysis, graph or table can only be determined after the data have been combined in an integrated database. Modifying the Davis invention to replicate the functionality of the claimed invention would destroy its ability to perform its intended function and purpose. Because the required modification of the Davis invention would destroy its intended function and purpose, the *prima facie* case of obviousness cannot be properly made.

**Reason #8** – The eighth reason claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134, claim 148 and claim 153 are patentable is that the Examiner has not been able to explain the rationale for modifying the cited combination of references to replicate the functionality of the claimed invention. *The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting In re Kahn 41 stated that “[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness (KSR, 550 U.S. at I, 82 USPQ2d at 1396).”* In spite of this well know requirement, the Examiner has not provided the required explanation. In particular, the Examiner has not explained what would motivate someone of average skill in the art to destroy the functionality of the Bielinski, Davis and Ray inventions and modify the principle of operation of all the references as discussed under Reason #3, Reason #4, Reason #5, Reason #6 and Reason #7. This explanation is particularly important when one considers that the cited documents teach away from all claimed methods and/or fail to teach or suggest almost every claim limitation as discussed under Reason #1 and Reason #2. In place of an explanation with articulated reasoning and a rational underpinning the Examiner has simply noted that documents containing some of the same words and word pairs used in the claims have been identified, made apparent material misrepresentations regarding the document teachings and then made a series of conclusory statements that it would be obvious to modify their teachings to replicate the claimed invention. Because no rational underpinning has been provided to support the legal conclusion of obviousness, the prima facie case of obviousness cannot be properly established.

**Reason #9** – The ninth reason claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91 and claim 134, claim 148 and claim 153 are patentable is that the claim rejections are non-statutory. As detailed in the preceding discussion, the obviousness rejections all appear to be based of a non-existent standard for obviousness – “mentions the same word pairs as another document” instead of “teaches or suggests an invention with all the same claim limitations to someone of average skill in the relevant arts”. It is well established that the *“Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art.”* *In re Lowry*, 32 F.3d 1579, 1582 (Fed. Cir. 1994). Furthermore, the selection of the Baur, Bielinski, Davis and Ray documents in an attempt to support an obviousness rejection for the claimed invention provides substantial evidence that those authoring the March 6, 2009 Office Action for the instant application appear to lack the level of skill in the art required to author a rejection for obviousness and/or for an alleged written description deficiency. It is well established that the *“hypothetical ‘person having ordinary skill in the art’ to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art.”* *Ex parte Hiyamizu*, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988). It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Baur, Bielinski, Davis and/or Ray as a reference in support of an obviousness rejection for the claimed inventions. Summarizing the preceding discussion, the claim rejections are non-statutory because they have been authored by individuals who appear to lack the level of skill in the art required to author such rejections and because they fail to consider all claim limitations.

Summarizing the above, the Appellant respectfully submits that the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of obviousness for a single claim. These failures provide additional evidence that the claimed inventions are new, novel and non-obvious.

**Issue 2 – Whether claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167 are obvious under 35 U.S.C. 103(a) given Davis in view Srivastava and Official Notice?**

The claims are patentable for several reasons. The primary reason is that the cited combination of documents (Davis, Srivastava and Official Notice) and the arguments related to the cited combination of documents fail to establish a prima facie case of obviousness for every rejected claim as detailed below.

**Reason #1** – The first reason that claim 144, claim 147, claim 152, claim 155, claim 156, claim

157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167 are patentable is that the cited documents fail to establish a *prima facie* case of obviousness because they teach away from all the claimed methods. MPEP § 2141.02 states that: "*in determining the difference between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious but whether the claimed invention as a whole would have been obvious (Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983)).*" Furthermore, it is well established that: *A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).* Examples of the cited documents teaching away from the claimed invention include:

1) Davis teaches away from the claimed method of creating an integrated database. The claimed invention teaches using the metadata mapping information obtained from a plurality of source databases to create a single, integrated database with a common schema defined by xml metadata. Davis teaches away by teaching:

- a) the storage of information that guides the conversion of data from a plurality of sources to an RDML format in an image database (226) that is separate from the source databases (230),
- b) the placement of RDML conversion information (504) in the source databases (230),
- c) the use of a common data type definition (dtd) to organize data from different systems, and
- d) that conversion information and source data should be combined in accordance with a common dtd using a viewer (100) or formatter (216) to produce documents (102) or views (108) that contain small amounts of data in an RDML format on demand.

By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

2) Srivastava teaches away from the claimed method of creating an integrated database. The claimed invention teaches using the metadata mapping information obtained from a plurality of source databases to create a single, integrated database with a common schema defined by xml metadata. Srivastava teaches away by teaching:

- a) extracting metadata and time-based samples from a media file,

- b) collecting additional metadata describing the media file from sources external to the file,
- c) producing a summary of the media file from the data collected in a) and b), and
- d) creating an integrated database by mapping elements from the summaries to a database schema along with the source XML data and the original media file.

By exclusively teaching methods that teach away from the claimed invention, Srivastava provides additional evidence of the novelty, non-obviousness and newness of claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

3) Davis teaches away from the claimed method of metadata mapping. The claimed invention teaches mapping metadata from source databases to a database schema defined by xml metadata. Davis teaches away by teaching data field mapping from source databases to an RDML document (see Davis, Column 15, lines 24 – 26). Affects claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

4) Srivastava teaches away from the claimed method of metadata mapping. The claimed invention teaches mapping metadata from source databases to a database schema defined by xml metadata. Srivastava teaches away by teaching document element mapping from xml documents to a database schema (see Srivastava, Column 8, lines 37 – 41). Affects claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167.

5) Davis teaches away from the claimed method of storing data. The claimed invention teaches the storage of data by item in an integrated database in accordance with a common schema. Davis teaches away by teaching the storage of data by line in accordance with a common dtd (see Davis, Column 21, line 58) in RDML documents. The RDML documents are stored as a vector, hash table or dictionary (see Davis, Column 33, line 65). Affects claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154.

Reason #2 –the second reason that the cited combination of documents fails to establish a *prima facie* case of obviousness that would support the rejection of claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167 is that the cited combination does not teach or

suggest one or more limitation for every rejected claim. It is well established that “when determining whether a claim is obvious, an examiner must make ‘a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.’ *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995). Thus, ‘obviousness requires a suggestion of all limitations in a claim.’ CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing *In re Royka*, 490 F.2d 981, 985 (CCPA 1974)) Furthermore, the Board of Patent Appeal and Interferences recently confirmed (*In re Wada and Murphy*, Appeal No. 2007- 3733) that a proper, post KSR obviousness determination still requires that an examiner must make “a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.” *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added). In other words, obviousness still requires a suggestion of all the limitations in a claim. Limitations not taught or suggested by the cited combination include:

Claim 144. Limitations not taught or suggested include:

- a) use metadata mapping to integrate and transform data representative of an organization from a plurality of systems into an integrated database,
- b) use a set of integration and conversion rules established using a metadata and conversion rules window, and
- c) where the set of integration and conversion rules are saved in a metadata mapping table.

Claim 147. Limitations not taught of suggested include:

- a) use metadata mapping to integrate and transform data representative of an organization from a plurality of systems into an integrated database, and
- b) use a set of integration and conversion rules are established using a metadata and conversion rules window.

Claim 152. Limitations not taught of suggested include:

- a) use metadata mapping to integrate and transform data representative of an organization from a plurality of systems into an integrated database, and
- b) use a set of integration and conversion rules are established using a metadata and conversion rules window.

Claim 155. Limitations not taught of suggested include:

- a) use metadata mapping to integrate and transform data representative of an organization from a plurality of systems into an integrated database,
- b) use a set of integration and conversion rules are established using a metadata and

*conversion rules window, and*

- c) *where the set of integration and conversion rules are saved in a metadata mapping table.*

Claims 156 and 165. Limitations not taught of suggested include: *wherein at least some data are pre-specified for integration and conversion.*

Claim 157. Limitations not taught of suggested include: *wherein a plurality of integrated enterprise data are stored in an application database in accordance with a common schema.*

Claim 161. Limitations not taught of suggested include: *wherein a metadata and conversion rules window is used to establish a metadata mapping table and a conversion rules table.*

Claims 162 and 166. Limitations not taught of suggested include: *wherein a common schema identifies data designations selected from the group consisting of components of value, sub components of value, known value drivers, elements of value, sub elements of value, non-relevant attributes and combinations thereof.*

Claim 163. Limitations not taught of suggested include: *storing a plurality of converted data in one or more tables to support organization processing.*

Claim 164. Limitations not taught of suggested include:

- a) *use metadata mapping to integrate and transform data representative of an organization from a plurality of systems into an integrated database,*
- b) *use a set of integration and conversion rules established using a metadata and conversion rules window,*
- c) *where the set of integration and conversion rules are saved in a metadata mapping table, and*
- d) *where metadata mapping is guided by a metadata mapping table.*

Claim 167. Limitations not taught of suggested include: *wherein at least a portion of the data are obtained from an Internet or an external database.*

**Reason #3** – The third reason claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167 are patentable is that the proposed theoretical combination would change the principles of operation of the invention described in the Davis reference. It is well established that when “*the proposed modification or combination of the prior art would change the principle*

*of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)". Principles of operation that would have to be changed to replicate the functionality of the claimed invention are shown in the table below. Because the required modifications of Davis would change its principles of operation, the prima facie case of obviousness cannot be properly made.*

Reference	Principle of operation	Principle change required
Davis	Identify and store RDML conversion information separately from source data, combine in a viewer or formatter to produce small amounts of data with a common dtd on demand	Identify xml conversion information, integrate and store all converted source data in a single database using a common schema
Davis	Use "data field mapping" to map from source databases to an RDML document defined by a dtd	Use "metadata mapping" to map from source database metadata to integrated database metadata
Davis	Store data by line in accordance with a dtd (see Davis, Column 21, line 58)	Store data by item in accordance with a schema

**Reason #4** – The fourth reason claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167 are patentable is that the required modification of Srivastava would change several principles of operation of the Srivastava invention. It is well established that when "*the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)"*". Principles of operation that would have to be changed to replicate the functionality of the claimed invention are shown in the table below.

Reference	Principle of operation	Principle change required
Srivastava	Analyze source data to develop a summary, store the summary in a database along with the source data	Identify xml conversion information, integrate and store all converted source data in a single database using a common schema
Srivastava	Use "document element mapping" to map elements from xml documents to a database schema	Use "metadata mapping" to map from source database metadata to integrated database metadata

Because the required modifications of Srivastava would change its principles of operation, the

prima facie case of obviousness cannot be properly made.

**Reason #5** – The fifth reason claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167 are patentable is that patentable is that the cited references teach away from their own combination. *It is improper to combine references where the references teach away from their combination.* *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983). Reasons the two documents teach away from their own combination include the fact that the two documents teach the exact opposite approach to data management as Davis teaches mapping from databases to documents while Srivastava teaches mapping from documents to a database. Along these same lines, Davis also teaches storing and presenting data by line while Srivastava teaches storing data files. Modifying one invention to match the other would destroy the modified inventions ability to function.

**Reason #6** – The sixth reason claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167 are patentable is that the proposed theoretical combination would destroy the intent, function and purpose of the Davis invention. It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made* (*In re Gordon* 733 F.2d 900, 221 U.S.PQ 1125 Fed Circuit 1984). The function of the Davis invention is to use common dtd to organize, manipulate and present data in a graph or table by line (Davis, Column 21, Line 58). In accordance with the Davis invention, the data that will analyzed and/or presented in a graph or table must be known before the data from different sources can be combined. By way of contrast, the system of the present invention stores data in accordance with a common schema and determines which data are to be analyzed or presented in a graph or table only after a series of analyses that rely on data in the integrated database have been completed. In accordance with the claimed invention, the data that will be included in an analysis, graph or table can only be determined after the data have been combined in an integrated database. Modifying the Davis invention to replicate the functionality of the claimed invention would destroy its ability to perform its intended function and purpose. Because the required modification of the Davis invention would destroy its intended function and purpose, the prima facie case of obviousness cannot be properly made.

**Reason #7** – The seventh reason claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167 are patentable is that the Examiner has not been able to explain the rationale for modifying the cited combination of references to replicate the functionality of the claimed invention. *The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting In re Kahn 41 stated that “[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness (KSR, 550 U.S. at I, 82 USPQ2d at 1396).”* In spite of this well known requirement, the Examiner has not provided the required explanation. In particular, the Examiner has not explained what would motivate someone of average skill in the art to destroy the functionality of the Davis invention and modify the principle of operation of both references as discussed under Reason #3, Reason #4 and Reason #6. This explanation is particularly important when one considers that the cited documents teach away from all claimed methods, teach away from their own combination and/or fail to teach or suggest almost every claim limitation as discussed under Reason #1, Reason #2 and Reason #5. In place of an explanation with articulated reasoning and a rational underpinning the Examiner has simply noted that documents containing some of the same words and word pairs used in the claims have been identified, made apparent material misrepresentations regarding the document teachings and then made a series of conclusory statements that it would be obvious to modify their teachings to replicate the claimed invention. Because no rational underpinning has been provided to support the legal conclusion of obviousness, the prima facie case of obviousness cannot be properly established.

**Reason #8** – The eighth reason claim 144, claim 147, claim 152, claim 155, claim 156, claim 157, claim 158, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167 are patentable is that the claim rejections are non-statutory. As detailed in the preceding discussion, the obviousness rejections all appear to be based of a non-existent standard for obviousness – “mentions the same word pairs as another document” instead of “teaches or suggests an invention with all the same claim limitations to someone of average skill in the relevant arts”. It is well established that the *“Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art.”* *In re Lowry, 32 F.3d 1579, 1582 (Fed. Cir. 1994).* Furthermore, the selection of the Bielinski, Davis and Ray documents in an attempt to support an obviousness rejection for the claimed invention provides substantial evidence that those authoring the March 6, 2009 Office Action for the instant application appear to lack the level of skill in the art required to author a rejection for

obviousness and/or for an alleged written description deficiency. It is well established that the “hypothetical ‘person having ordinary skill in the art’ to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art.” *Ex parte Hiyamizu*, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988). It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Davis and/or Srivastava as a reference in support of an obviousness rejection for the claimed inventions. Summarizing the preceding discussion, the claim rejections are non statutory because they have been authored by individuals who appear to lack the level of skill in the art required to author such rejections and because they fail to consider all claim limitations.

Summarizing the above, the Appellant respectfully submits that the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of obviousness for a single claim. These failures provide additional evidence that the claimed inventions are new, novel and non-obvious.

**Issue 3 – Whether claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154 are obvious under 35 U.S.C. 103(a) Davis in view of Official Notice?**

The claims are patentable for several reasons. The primary reason is that the cited combination of documents (Davis and Official Notice) and the arguments related to the cited combination of documents fail to establish a prima facie case of obviousness for every rejected claim as detailed below.

**Reason #1** – The first reason that claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154 are patentable is that the cited document fails to establish a prima facie case of obviousness because it teaches away from all the claimed methods. MPEP § 2141.02 states that: *“in determining the difference between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious but whether the claimed invention as a whole would have been obvious (Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983)).”* Furthermore, it is well established that: *A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).* Examples of the cited documents teaching away from the claimed invention include:

1) Davis teaches away from the claimed method of creating an integrated database. The claimed invention teaches using the metadata mapping information obtained from a plurality of source databases to create a single, integrated database with a common schema defined by xml metadata. Davis teaches away by teaching:

- a) the storage of information that guides the conversion of data from a plurality of sources to an RDML format in an image database (226) that is separate from the source databases (230),
- b) the placement of RDML conversion information (504) in the source databases (230),
- c) the use of a common data type definition (dtd) to organize data from different systems, and
- d) that conversion information and source data should be combined in accordance with a common dtd using a viewer (100) or formatter (216) to produce documents (102) or views (108) that contain small amounts of data in an RDML format on demand.

By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154.

2) Davis teaches away from the claimed method of metadata mapping. The claimed invention teaches mapping metadata from source databases to a database schema defined by xml metadata. Davis teaches away by teaching data field mapping from source databases to an RDML document (see Davis, Column 15, lines 24 – 26). Affects claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154.

3) Davis teaches away from the claimed method of storing data. The claimed invention teaches the storage of data by item in an integrated database in accordance with a common schema. Davis teaches away by teaching the storage of data by line in accordance with a common dtd (see Davis, Column 21, line 58) in RDML documents. The RDML documents are stored as a vector, hash table or dictionary (see Davis, Column 33, line 65). Affects claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154.

4) Davis teaches away from the claimed common dictionary. The claimed invention teaches the use of a common schema that comprises a data dictionary. Davis teaches away by teaching the matching of data field definitions from different data sources without

reference to a common data dictionary that is part of a schema (see Davis, Column 33, line 5 through line 45). Affects claim 40, claim 48 and claim 139.

**Reason #2** –the second reason that the cited combination of documents fails to establish a *prima facie* case of obviousness that would support the rejection of claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154 is that the cited combination does not teach or suggest one or more limitation for every rejected claim. *It is well established that “when determining whether a claim is obvious, an examiner must make ‘a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.’* *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995). Thus, ‘obviousness requires a suggestion of all limitations in a claim.’ CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (*citing In re Royka*, 490 F.2d 981, 985 (CCPA 1974)) Furthermore, the Board of Patent Appeal and Interferences recently confirmed (*In re Wada and Murphy*, Appeal No. 2007- 3733) that a proper, post KSR obviousness determination still requires that an examiner must make “a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.” *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (*emphasis added*). In other words, obviousness still requires a suggestion of all the limitations in a claim. Limitations not taught or suggested by the cited combination include:

Claim 40, 48 and 139. Limitations not taught or suggested include:

- a) *use xml and a common schema to integrate and transform data representative of an organization from a plurality of systems into an integrated database, and*
- b) *where the common schema has a data dictionary that defines standard data attributes from the group consisting of account numbers, components of value, currencies, elements of value, units of measure and time periods.*

Claim 150 (affects claims 151 and 154). Limitations not taught or suggested include:

- a) *use metadata mapping to integrate and convert a plurality of data from a plurality of enterprise related systems in accordance with xml and a common schema to as required to transform said data into an integrated database and output said database, and*
- b) *where metadata mapping is guided by a metadata mapping table.*

Claim 151. Limitations not taught or suggested include: *wherein at least some data are pre-specified for integration and conversion.*

Claim 154. Limitations not taught or suggested include: *external databases.*

**Reason #3** – The third reason claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154 are patentable is that the proposed theoretical combination would change the principles of operation of the invention described in the Davis reference. It is well established that when “*the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious.* *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)”. Principles of operation that would have to be changed to replicate the functionality of the claimed invention are shown in the table below. Because the required modifications of Davis would change its principles of operation, the prima facie case of obviousness cannot be properly made.

Reference	Principle of operation	Principle change required
Davis	Identify and store RDML conversion information separately from source data, combine in a viewer or formatter to produce small amounts of data with a common dtd on demand	Identify xml conversion information, integrate and store all converted source data in a single database using a common schema
Davis	Use “data field mapping” to map from source databases to an RDML document defined by a dtd	Use “metadata mapping” to map from source database metadata to integrated database metadata
Davis	Match data field definitions from different data sources without reference to a common data dictionary	Use a common data dictionary that is part of a common schema
Davis	Store data by line in accordance with a dtd (see Davis, Column 21, line 58)	Store data by item in accordance with a schema

**Reason #4** – The fourth reason claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154 are patentable is that the proposed theoretical combination would destroy the intent, function and purpose of the Davis invention. It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made* (*In re Gordon* 733 F.2d 900, 221 U.S.PQ 1125 Fed Circuit 1984). The function of the Davis invention is to use common dtd to organize, manipulate and present data in a graph or table by line (Davis, Column 21, Line 58). In accordance with the Davis invention, the data that will analyzed and/or presented in a graph or table must be known before the data from different sources can be combined. By way of contrast, the system of the present invention stores data in accordance with a common schema and determines which data are to be analyzed or presented in a graph or table only after a series of analyses that rely on

data in the integrated database have been completed. In accordance with the claimed invention, the data that will be included in an analysis, graph or table can only be determined after the data have been combined in an integrated database. Modifying the Davis invention to replicate the functionality of the claimed invention would destroy its ability to perform its intended function and purpose. Because the required modification of the Davis invention would destroy its intended function and purpose, the *prima facie* case of obviousness cannot be properly made.

**Reason #5** – The fifth reason claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154 are patentable is that the Examiner has not been able to explain the rationale for modifying the cited combination of references to replicate the functionality of the claimed invention. *The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting In re Kahn 41 stated that “[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness (KSR, 550 U.S. at I, 82 USPQ2d at 1396).”* In spite of this well known requirement, the Examiner has not provided the required explanation. In particular, the Examiner has not explained what would motivate someone of average skill in the art to destroy the functionality of the Davis invention and modify its principles of operation as discussed under Reason #3 and Reason #4. This explanation is particularly important when one considers that Davis teaches away from all claimed methods and/or fails to teach or suggest almost every claim limitation as discussed under Reason #1 and Reason #2. In place of an explanation with articulated reasoning and a rational underpinning the Examiner has simply noted that documents containing some of the same words and word pairs used in the claims have been identified, made apparent material misrepresentations regarding the document teachings and then made a series of conclusory statements that it would be obvious to modify their teachings to replicate the claimed invention. Because no rational underpinning has been provided to support the legal conclusion of obviousness, the *prima facie* case of obviousness cannot be properly established.

**Reason #6** – The sixth reason claim 40, claim 41, claim 48, claim 49, claim 139, claim 140, claim 146, claim 150, claim 151 and claim 154 are patentable is that the claim rejections are non-statutory. As detailed in the preceding discussion, the obviousness rejections all appear to be based of a non-existent standard for obviousness – “mentions the same word pairs as another document” instead of “teaches or suggests an invention with all the same claim

limitations to someone of average skill in the relevant arts". It is well established that the "Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art." *In re Lowry*, 32 F.3d 1579, 1582 (Fed. Cir. 1994). Furthermore, the selection of the Davis document in an attempt to support an obviousness rejection for the claimed invention provides substantial evidence that those authoring the March 6, 2009 Office Action for the instant application appear to lack the level of skill in the art required to author a rejection for obviousness and/or for an alleged written description deficiency. It is well established that the "*hypothetical 'person having ordinary skill in the art' to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art.*" *Ex parte Hiyamizu*, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988). It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Davis as a reference in support of an obviousness rejection for the claimed inventions. Summarizing the preceding discussion, the claim rejections are non statutory because they have been authored by individuals who appear to lack the level of skill in the art required to author such rejections and because they fail to consider all claim limitations.

Summarizing the above, the Appellant respectfully submits that the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of obviousness for a single claim. These failures provide additional evidence that the claimed inventions are new, novel and non-obvious.

**Issue 4 – Whether claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 145, claim 146, claim 147, claim 148, claim 149, claim 159, claim 160, claim 161, claim 162 and claim 163 represent statutory subject matter under 35 USC §101?**

The Appellant respectfully traverses the rejections for non statutory subject matter in four ways. First, by noting that the March 6, 2009 Office Action has failed to establish a prima facie case of non-statutory subject matter. Second, by noting that the stated basis for the claim rejection is incorrect. Third, by noting that the claim rejections fail under both standards of the APA. Fourth, by noting that the claimed inventions clearly meet the legal requirements for statutory subject matter.

**Reason #1** – The first way the Appellant will traverse the rejection of claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 145, claim 146, claim 147, claim 148, claim 149, claim 159, claim 160, claim 161, claim 162 and claim 163 under 35 U.S.C. §101 is by noting that the Examiner has failed to establish a prima facie case of non statutory subject matter. As noted in MPEP 2106 "*the burden is on the USPTO to set forth a prima facie case of*

*unpatentability. Therefore if USPTO personnel determine that it is more likely than not that the claimed subject matter falls outside all of the statutory categories, they must provide an explanation.* (See, e.g., *In re Nuitjen*, Docket no. 2006-1371 (Fed. Cir. Sept. 20, 2007)(slip. Op. at 18)). In spite of this well known requirement, the Examiner has made an unsupported conclusion regarding patentability without providing an explanation or evidence. In particular the Examiner has failed to explain why the claims are non statutory after considering the fact that the Supreme Court has specifically stated “[a] process may be patentable irrespective of the particular form of the instrumentalities used” (*Cochrane v. Deener*, 94 U. S. 780) and in light of the fact that the Supreme Court and the CAFC (see *Bilski*, 545 F.3d 943, 88 U.S.P.Q.2d 1385 (2008)) have both found the transformation of data regarding real world activities and/or objects into a different state or thing to be statutory subject matter. In short, the complete absence of an explanation supported by evidence leads to the inevitable conclusion that the Examiner has failed to establish a prima facie case that would support a §101 rejection for a single claim.

**Reason #2** – The second way the Appellant will traverse the 35 U.S.C. §101 rejections of claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 145, claim 146, claim 147, claim 148, claim 149, claim 159, claim 160, claim 161, claim 162 and claim 163 is by noting that the assertion that the claimed inventions describe purely mental processes is incorrect. Human mental processes cannot reliably complete tasks that require the manipulation of more than four variables at a time and/or the retention of more than four “chunks” in working memory (see Evidence Appendix, pages 69). Because the claimed inventions require the concurrent manipulation and storage of numbers of variables that are several orders of magnitude greater than the human mind is capable of reliably processing, the stated basis for the claim rejection is demonstrably false. The Appellant notes that the stated reason for the §101 rejections claim rejections adds to the substantial evidence provided by the prosecution of this application and related applications that those authoring the March 6, 2009 Office Action lack the requisite skill in the art to examine patents for inventions for the arts described in the present application.

**Reason #3** – The third way the Appellant will traverse the §101 rejections of claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 145, claim 146, claim 147, claim 148, claim 149, claim 159, claim 160, claim 161, claim 162 and claim 163 is by noting that the assertions regarding the alleged non statutory subject matter are not in compliance with the requirements of the Administrative Procedures Act and are therefore moot. In *Dickinson v. Zurko*, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings of fact are the standards set forth in the Administrative

Procedure Act (“APA”) at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. The Appellant submits that the 35 U.S.C. §101 rejection of claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 145, claim 146, claim 147, claim 148, claim 149, claim 159, claim 160, claim 161, claim 162 and claim 163 fails under both standards. It fails under the substantial evidence standard because as detailed above under Reasons # 1 and #2 because no meaningful evidence was presented.

The claim rejections also fail under the arbitrary and capricious standard for a number of reasons including:

- a) there is no rational connection between the U.S.P.T.O.’s fact-findings associated with the allowance and issue of U.S. Patent 6,732,095 (hereinafter, Warshavsky) and/or U.S. Patent 7,177,822 (hereinafter, Mahmood) for inventions that completes a similar data management processes and the rejection of claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 145, claim 146, claim 147, claim 148, claim 149, claim 159, claim 160, claim 161, claim 162 and claim 163 for being non statutory; and
- b) there is no rational connection between the U.S.P.T.O.’s fact-findings associated with the allowance and issue of Davis and the rejection of claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 145, claim 146, claim 147, claim 148, claim 149, claim 159, claim 160, claim 161, claim 162 and claim 163 for being non statutory.

The documented pattern of arbitrarily and capriciously rejecting the Appellant’s claims that are similar to the claims in patents issued to large companies for allegedly being non-statutory can also be observed in appeals for applications 09/761,670, 09/764,068, 10/743,417, 10/743,616, 10/750,792 and 11/278,419.

**Reason #4** – The fourth reason claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 145, claim 146, claim 147, claim 148, claim 149, claim 159, claim 160, claim 161, claim 162 and claim 163 are patentable is that the claimed inventions are processes that instruct a computer system to transform data representative of things that physically exist into a different state or thing: an integrated database. The database has utility in analyzing performance, supporting the completion of simulations and managing business operations. As noted in the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility “*the Supreme Court noted that one example of a statutory “process” is where the process steps provide a transformation or reduction of an article to a different state or thing*

(*Diehr*, 450 U.S. at 183, 209 USPQ at 6). In *Alappat*, the Court held that “*data, transformed by a machine*” “*to produce a smooth waveform display*” “*constituted a practical application of an abstract idea.*” *State Street*, 149 F.3d at 1373. In *Arrhythmia*, the Court held “*the transformation of electrocardiograph signals*” “*by a machine*” “*constituted a practical application of an abstract idea.*” *Id.* Likewise, in *State Street*, the Court held that “*the transformation of data*” “*by a machine*” “*into a final share price, constitutes a practical application of a mathematical algorithm.*” *Id.* Thus, while *Diehr* involved the transformation of a tangible object – curing synthetic rubber – the Court also regards the transformation of intangible subject matter to similarly be eligible, so long as data represent some real world activity. *In re Bilski*, 545 F.3d 943, 88 U.S.P.Q.2d 1385 (2008) generally follows these prior decisions and states that the data transformed by a process must represent an object or substance that physically exists.

The Appellant respectfully submits that the preceding discussion makes it clear that the claimed invention passes the transformation test and that the claims describe a process that supports a number of practical applications with substantial, specific utilities and that it therefore represents statutory subject matter.

**Issue 5 – Whether claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 50, claim 51, claim 52, claim 135, claim 136, claim 137, claim 138, claim 141, claim 142, claim 143, claim 145 and claim 149 are anticipated under 35 USC §102(e) by Davis?**

The claims are patentable because the arguments in the March 6, 2009 Office Action fail to establish a *prima facie* case or anticipation and because the claim rejections fail to meet the requirements of the APA as detailed below.

**Reason #1** – The first reason that claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 50, claim 51, claim 52, claim 135, claim 136, claim 137, claim 138, claim 141, claim 142, claim 143, claim 145 and claim 149 are patentable is that the Davis document fails to establish a *prima facie* case of anticipation because it fails to describe every element of the rejected claims. It is well established that: “*A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.*” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Elements missing by claim include:

Claims 34, 44, 52 and 135 – Elements that are not expressly or inherently described include:

a) *integrating data from a plurality of systems using xml and a common schema – the*

Davis document does not expressly or inherently teach a schema of any kind. Davis uses RDML and an xml 1.0 compliant dtd to organize data from a plurality of systems in a document or an RDML viewer;

b) *transforming said data into an integrated database* – the Davis document does not expressly or inherently teach that data from a plurality of systems are transformed into an integrated database. Davis teaches the storage of information that guides the conversion of data from a plurality of sources to an RDML format in an image database (226) that is separate from the source databases (230), the placement of RDML conversion information (504) in the source databases (230), the use of a common data type definition (dtd) to organize data from different systems, and that conversion information and source data should be combined in accordance with a common dtd using viewer (100) or formatter (216) to produce documents (102) or views (108) that contain small amounts of data in an RDML format.; and

c) *where said data is representative of a physical object* – Davis does not expressly or inherently teach that data are limited to data representative of a physical object.

Claims 35, 36, 37, 38, 39, 43, 45, 46, 47, 51, 136, 137, 138 and 143 – Elements that are not expressly or inherently described include:

a) *a physical object that comprises an organization* – Davis does not expressly or inherently teach that data are limited to data representative of a physical object or organization,

b) *an organization that is a single product, a group of products, a division, a company, a multi-company corporation or a value chain* - Davis does not expressly or inherently teach that data are limited to data representative of an organization,

c) *a common schema that includes an organization designation* – the Davis document does not expressly or inherently teach a schema of any kind (it teaches the use of a dtd as mentioned previously), and

d) *a common schema that includes a data structure and/or a data dictionary* – the Davis document does not expressly or inherently teach a schema of any kind.

Claims 40, 48 and 139 – Elements that are not expressly or inherently described include:

a) *a data dictionary that defines standard data attributes from the group consisting of account numbers, components of value, currencies, elements of value, units of measure and time periods.* Davis does not expressly or inherently teach the development or use of a data dictionary. Davis teaches the development of a mapping dictionary based on text, class sets and user input (Column 33, line 44).

Claims 141, 144 and 145 – Elements that are not expressly or inherently described include:

- a) *integrating data from a plurality of systems using xml and a common schema* – the Davis document does not expressly or inherently teach a schema of any kind. Davis uses RDML and an xml 1.0 compliant dtd to organize data from a plurality of systems in a document or an RDML viewer;
- b) *transform said data into an integrated database* – the Davis document does not expressly or inherently teach that data from a plurality of systems are transformed into an integrated database. Davis teaches the storage of information that guides the conversion of data from a plurality of sources to an RDML format in an image database (226) that is separate from the source databases (230), the placement of RDML conversion information (504) in the source databases (230), the use of a common data type definition (dtd) to organize data from different systems, and that conversion information and source data should be combined in accordance with a common dtd using viewer (100) or formatter (216) to produce documents (102) or views (108) that contain small amounts of data in an RDML format; and
- c) *where said data is representative of a physical object* – Davis does not expressly or inherently teach that data are limited to data representative of a physical object; and
- d) *where metadata mapping is guided by a metadata mapping table* – Davis does not expressly or inherently teach metadata mapping and/or that metadata mapping is guided by a metadata mapping table. Davis teaches the development of a mapping dictionary based on text, class sets and user input (Column 33, line 44).

Claim 142 – Elements that are not expressly or inherently described include: *wherein at least some data are pre-specified for integration* - Davis does not expressly or inherently teach where some data are pre-specified for integration.

**Reason #2** – The second reason that claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 50, claim 51, claim 52, claim 135, claim 136, claim 137, claim 138, claim 141, claim 142, claim 143, claim 145 and claim 149 are patentable is that the Davis document fails to establish a *prima facie* case of anticipation because it fails to provide the same level of detail that is present in the claim. It is well established that: “*The identical invention must be shown in as complete detail as is contained in the .. claim.*” *Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).* Details missing by claim include:

Claims 34, 44, 52 and 135 – Elements that are not described using the same level of detail include:

- a) *integrating data from a plurality of systems using xml and a common schema;*
- b) *transforming said data into an integrated database; and*
- c) *where said data is representative of a physical object.*

Claims 35, 36, 37, 38, 39, 43, 45, 46, 47, 51, 136, 137, 138 and 143 – Elements that are not described using the same level of detail include:

- a) *a physical object that comprises an organization,*
- b) *an organization that is a single product, a group of products, a division, a company, a multi-company corporation or a value chain,*
- c) *a common schema that includes an organization designation, and*
- d) *a common schema that includes a data structure and/or a data dictionary.*

Claims 40, 48 and 139 – Elements that are not described using the same level of detail include:

- a) *a data dictionary that defines standard data attributes from the group consisting of account numbers, components of value, currencies, elements of value, units of measure and time periods.*

Claims 41, 49 and 140 – Elements that are not described using the same level of detail include:

- a) *data that are obtained from a plurality of systems selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, intellectual property management systems, process management systems, vendor management systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems, purchasing systems and combinations thereof.*

Claims 141, 144 and 145 – Elements that are not described using the same level of detail include:

- a) *integrating data from a plurality of systems using xml and a common schema;*
- b) *transform said data into an integrated database;*
- c) *where said data is representative of a physical object; and*
- d) *where metadata mapping is guided by a metadata mapping table.*

Claim 142 – Elements that are not described using the same level of detail include:  
*wherein at least some data are pre-specified for integration.*

**Reason #3** – The third reason that claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 50, claim 51, claim 52, claim 135, claim 136, claim 137, claim 138, claim 141, claim 142, claim 143, claim 145 and claim 149 are patentable is that the March 6, 2009 Office Action does not describe the basis in fact or technical reasoning that is required to support the statements regarding allegedly inherent characteristics contained in the Davis document. It is well established that that: *"in relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art."* *Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990).* In spite of this well known requirement, no explanation was provided.

**Reason #4** – The fourth reason that claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 50, claim 51, claim 52, claim 135, claim 136, claim 137, claim 138, claim 141, claim 142, claim 143, claim 145 and claim 149 are patentable is that the methods disclosed in the Davis document do not enable the completion of a single claim. Replicating the functionality of the rejected claims would require the alteration or removal of a number of methods taught by Davis. It would also require the addition of a number of new capabilities not described by Davis. Extensive and undue experimentation would be required to support both steps. It is well established that that: *"in order to anticipate a claimed invention, a prior art reference must enable one of ordinary skill in the art to make the invention without undue experimentation.* *Finisar Corp. v. DirecTV Group, Inc., 523 F.3d 1323, 1336 (Fed. Cir. 2008) (citing In re Omeprazole Patent Litig., 483 F.3d 1364, 1379 (Fed. Cir. 2007)).*

Methods that would have to be forgotten or removed (aka unlearned) include the:

- 1) reliance on an RDML viewer (100) or formatter (216) to combine data from different sources into a single document or view,
- 2) reliance on an image database (226) to store conversion information,
- 3) reliance on processing, storing and viewing data by pre-specified line,
- 4) reliance on documents for data storage,
- 5) use of a data type definition (aka dtd) for establishing a common format,
- 6) exclusive use of flat files or tables for data input, and
- 7) reliance on inserting a table (504) that holds information regarding the data tables into

the data source database (230) for later reference,

It is well known to those of average skill in the art that unlearning “known” methods is often the most difficult part of learning for people of all ages. Extensive and undue experimentation would be required to reveal the fact that the listed Davis methods have serious shortcomings and should be unlearned (or forgotten). After this extensive and undue experimentation revealed the need for unlearning, there would still be a need for additional experimentation to discover the new capabilities that should be added and the best way to add said capabilities. In particular, experimentation would be required to determine:

- 8) a method for mapping from data source metadata to the metadata for a schema,
- 9) a method for converting large volumes of data being extracted from a plurality of databases to a common format by item,
- 10) a method for converting large volumes of data being extracted from a plurality of databases to common units of measure by item,
- 11) a method for extracting data from a plurality of databases incorporating the methods identified in items 8, 9 and 10,
- 12) a method for storing data being extracted from a plurality of databases using the methods identified in items 8, 9, 10 and 11 so that it can be used by a variety of independent applications without a special viewer and without knowing in advance which data are going to be analyzed and/or displayed, and
- 13) a method for providing a user with the ability to simultaneously and easily complete the methods identified in items 8, 9, 10, 11 and 12.

The required experimentation would clearly be excessive and undue because the references disclosed to date do not support the development of any of the methods outlined above (i.e. items 8 through 13). Furthermore, the references teach that there would be no motivation to complete this work as XML was going to be replaced by SMIL (Bowman Amuah, C 42, L 5 - 25).

**Reason #5** – The fifth reason that claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 50, claim 51, claim 52, claim 135, claim 136, claim 137, claim 138, claim 141, claim 142, claim 143, claim 145 and claim 149 are patentable is that the Davis document does not have all the elements of the claims and it does not arrange them in the same manner disclosed in any of the claims. It is well established that: *the reference must not only disclose all elements of the claim within the four corners of the document, but it must also disclose those elements “arranged as in the claim”* (*Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)). Missing elements were discussed under Reason #1. Davis also fails to arrange elements as they are arranged in the claim as

Davis relies on combining data from source databases (230) and a separate image database (226) in a RDML viewer (100) or formatter instead of using an integrated database.

**Reason #6** – The sixth reason that claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 50, claim 51, claim 52, claim 135, claim 136, claim 137, claim 138, claim 141, claim 142, claim 143, claim 145 and claim 149 are patentable is that the anticipation rejections are not in compliance with the requirements of the Administrative Procedures Act and are therefore moot. As detailed under Reason #1, Reason #2, Reason #3, Reason #4 and Reason #5 these rejections fail under the substantial evidence standard.

The Appellant respectfully submits that there are several reasons that the anticipation rejections presented in the March 6, 2009 Office Action fail under the arbitrary and capricious standard. One reason is that there is no rational connection between the U.S.P.T.O.'s fact-findings and the rejection of the claims because the document chosen by the Examiner provides substantial evidence of novelty. Another reason is that the allowance and issue of Davis, Warshavsky and Mahmood appears to show that the presence of an enabling disclosure is not a bar to the issue of a patent. The documented pattern of arbitrarily and capriciously rejecting the Appellant's claims for anticipation when the level of experimentation required to develop the Appellant's inventions are orders of magnitude greater than the level of experimentation required to develop the inventions disclosed in allowed patents for large companies can also be observed in the appeals for U.S. Patent Applications 09/764,068, 10/097,344, 10/166,758 and 10/287,586.

**Issue 6 – Whether claim 34, claim 44, claim 62, claim 135, claim 136, claim 141, claim 145, claim 150, claim 155, claim 159 and claim 164 are enabled under 35 U.S.C. §112, first paragraph?**

The claims are patentable because the arguments in the March 6, 2009 Office Action fail to establish a prima facie case of a lack of enablement, because the claim rejections fail to meet the requirements of the APA and because the claim rejections are non statutory as detailed below.

**Reason #1** – The first reason that claim 34, claim 44, claim 62, claim 135, claim 136, claim 141, claim 145, claim 150, claim 155, claim 159 and claim 164 are patentable is that the Examiner has failed to establish a prima facie case that the specification does meet the enablement requirements of §112 first paragraph. *"A description as filed is presumed to be adequate; unless or until sufficient evidence or reasoning to the contrary has been presented by the examiner to rebut the presumption.* See, e.g., *In re Marzocchi*, 439 F.2d 220, 224, 169 USPQ 367, 370

(CCPA 1971). The examiner, therefore, must have a reasonable basis to challenge the adequacy of the written description. The examiner has the initial burden of presenting by a preponderance of evidence why a person skilled in the art would not recognize in an applicant's disclosure a description of the invention defined by the claims. Wertheim, 541 F.2d at 263, 191 USPQ at 97. In rejecting a claim, the examiner must set forth express findings of fact regarding the above analysis which support the lack of written description conclusion. These findings should: (A) Identify the claim limitation at issue; and (B) Establish a prima facie case by providing reasons why a person skilled in the art at the time the application was filed would not have recognized that the inventor was in possession of the invention as claimed in view of the disclosure of the application as filed. A general allegation of "unpredictability in the art" is not a sufficient reason to support a rejection for lack of adequate written description." Furthermore, it is well established that "the test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation." United States v. Teletronics, Inc., 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988). This has been the primary test of enablement since 1916 (see Mineral Separation v. Hyde, 242 U.S. 261, 270 (1916)). The determination that "undue experimentation" would have been needed to make and use the claimed invention is not a single, simple factual determination (*In re Wands*, 858 F.2d 731, 8 USPQ2d 1400 (Fed. Cir. 1988)). Factors which need to be considered include: the nature of the invention, the state of the prior art, the predictability or lack thereof in the art, the amount of direction or guidance present, the presence or absence of working examples, the breadth of the claims, the relative skill of those in the art and the quantity of experimentation needed (hereinafter referred to as the Wands factors). A conclusion of lack of enablement means that, based on the evidence regarding each of the above factors (the Wands factors), the specification, at the time the application was filed, would not have taught one skilled in the art how to make and/or use the full scope of the claimed invention without undue experimentation (*In re Wright*, 999 F.2d 1557, 1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993)). The arguments presented in the February 6, 2009 Office Action fail to establish the prima facie case required to sustain a §112 first paragraph rejection for a single claim in several ways:

1. No evidence has been presented. As noted above, rejection under §112 first paragraph requires a preponderance of evidence and express findings of fact. In spite of this well known requirement, no facts have been identified and no evidence has been presented that excessive experimentation would be required and/or that the full scope of the claimed invention has not been described. In place of the required evidence, the Examiner has made conclusory statements that a number of phrases (i.e. "an integrated

database”, “a physical object or substance”, “output said database”, etc.) are allegedly not described in the specification;

2. The conclusory statements used to support the claim rejections are incorrect. The specification describes a process for developing an application database for an enterprise. The application database is an integrated database. An enterprise is a physical object and the integrated, application database is the output of the process (see Evidence Appendix, pages 76 - 79). The database schema relies on metadata mapping that identifies different fields for the different categories of value and the specification describes a series of tests that comprise a test of statistical validity of the specified schema. Furthermore, U.S. Patent 5,615,109 which is incorporated by reference also describes the development of an integrated database. In short, no new matter was introduced by the current set of claims,

3. The Wands factors were not considered. The Examiner has not completed a single aspect of the required Wands factor analysis, and

4. Relevant evidence has been ignored. Evidence that the Examiner has apparently ignored includes a declaration submitted in support of this application. The declaration represents the only known independent review of the instant patent specification by an individual with average skill in the relevant arts under either the pre or post KSR standards for determining the possession of said level of skill. It completely rebuts the Examiner's contentions regarding the claims (see Evidence Appendix, pages 76 – 79).

**Reason #2** – The second reason that claim 34, claim 44, claim 62, claim 135, claim 136, claim 141, claim 145, claim 150, claim 155, claim 159 and claim 164 are patentable is that there is no statutory basis for the claim rejections. The use of a term in a claim that is not *ipsis verbis* included in the specification is not a statutory basis for claim rejection. This is particularly true when the term describes a plurality of modes for utilizing an invention described in the specification as it is well established that “*the enablement requirement is met if the description enables any mode of making and using the claimed invention*” (see *Invitrogen Corp. v. Clontech Labs, Inc.*, 429 F.3d 1052, 1058 (Fed. Cir. 2005) where the Court referenced *Engel Industries, Inc. v. Lockformer Co.* 946 F.2d 1528 (Fed. Cir. 1991)). The Examiner's assertion that these phrases were not described is another example of an apparent lack of understanding of the scientific and engineering principles applicable to the pertinent art.

**Reason #3** – The third reason that claim 34, claim 44, claim 62, claim 135, claim 136, claim 141, claim 145, claim 150, claim 155, claim 159 and claim 164 are patentable is that the assertions regarding the alleged lack of enablement in the written description are not in compliance with the requirements of the Administrative Procedures Act and are therefore moot. In *Dickinson v. Zurko*, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of PTO findings are the standards set forth in the

Administrative Procedure Act (“APA”) at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. The Appellant respectfully submits that the arguments presented in the March 6, 2009 Office Action fail to meet both standards. As detailed under Reason #1 and Reason #2, these arguments fail under the substantial evidence standard because no evidence was presented about factors that are relevant to the statutory requirements for a written description rejection.

The Appellant respectfully submits that there are also several reasons that the written description rejections presented in the March 6, 2009 Office Action fail under the arbitrary and capricious standard, including:

- a) it is well established that written descriptions are adequate if they teach those who understand the scientific and engineering principles applicable to the pertinent art how to make and use the invention without undue experimentation. Given this fact, there is no rational connection between the decision to reject claims on the basis of a written description rejection contained in the March 6, 2009 Office Action and the agency’s prior fact-findings that have documented the fact that those authoring/signing the Office Action do not appear to have the capability of understanding the scientific and engineering principles applicable to the pertinent art” (see Issue 1, Reason #9; Issue 2, Reason #8; Issue 3, Reason #6 and Issue 4, Reason #2); and
- b) there is no rational connection between the agency’s prior fact findings that have found that U.S. Patent 5,615,109 (which is incorporated by reference) and U.S. Patent Application 10/166,758 both describe inventions for creating integrated databases and the rejection of the claims in the instant application for allegedly introducing new matter by incorporating the term “integrated database” and/or not describing an integrated database (see related appeal for U.S. Patent Application 10/166,758 for details).

In short, because there is no rational connection between the agency’s prior fact-findings and the claim rejections for written description, the rejection of the listed claims would also fail under the arbitrary and capricious standard. The documented pattern of arbitrarily and capriciously incorporating non-statutory rejections of the Appellant’s claims for allegedly lacking enablement when the claims cover subject matter similar to the subject matter in claims contained in large company patents can also be observed in the appeals for applications 09/761,670, 10/743,417, 10/750,792 and 11/278,419.

**Issue 7 – Whether claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim**

141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149, claim 150, claim 151, claim 152, claim 153, claim 154, claim 155, claim 156, claim 157, claim 158, claim 159, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167 are indefinite under 35 U.S.C. §112, second paragraph?

In the In the March 6, 2009 Office Action for the above referenced application claim 34, claim 35, claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 62, claim 63, claim 64, claim 68, claim 69, claim 70, claim 90, claim 91, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149, claim 150, claim 151, claim 152, claim 153, claim 154, claim 155, claim 156, claim 157, claim 158, claim 159, claim 160, claim 161, claim 162, claim 163, claim 164, claim 165, claim 166 and claim 167 are rejected under §112 second paragraph as being indefinite for using the phrases “as required” and “outputting a database” and/or for relying on claims that use the listed phrases. The Examiner also feels that it is not clear that an organization is a physical object. The Appellant will respectfully traverses the §112 second paragraph rejections of each claim in two ways. First, by noting that the Office Action has failed to establish a *prima facie* case that the claims do not meet the requirements of §112 second paragraph. Second, by noting that the claim rejections based on assertions of alleged indefiniteness are not in compliance with the Administrative Procedures Act and are therefore moot. The first way the Appellant will traverse the 35 U.S.C. §112 second paragraph rejection of the rejected claims will be by noting that the arguments presented by the Examiner in the March 6, 2009 Office Action fail to establish the *prima facie* case required to sustain a §112 second paragraph rejection. *MPEP 2173.02 states that: definiteness of claim language must be analyzed, not in a vacuum, but in light of:*

- (A) *The content of the particular application disclosure;*
- (B) *The teachings of the prior art; and*

*(C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made. In reviewing a claim for compliance with 35 U.S.C. 112, second paragraph, the examiner must consider the claim as a whole to determine whether the claim apprises one of ordinary skill in the art of its scope and, therefore, serves the notice function required by 35 U.S.C. 112, second paragraph, by providing clear warning to others as to what constitutes infringement of the patent. See, e.g., Solomon v. Kimberly-Clark Corp., 216 F.3d 1372, 1379, 55 USPQ2d 1279, 1283 (Fed. Cir. 2000). See also In re Larsen, No. 01-1092 (Fed. Cir. May 9, 2001).* In the case of the rejected claims there are a number reasons Examiner has failed to establish the *prima facie* case that the specification

does not meet the requirements of §112 second paragraph for every rejected claim. The reasons the Examiner has failed to establish a *prima facie* case of indefiniteness are:

**Reason #1** The first reason the Examiner has failed to establish a *prima facie* case of indefiniteness is that the conclusory statements used to support the claim rejections are incorrect. The specification describes a process for developing an application database for an enterprise. The application database is an integrated database. The integrated, application database is the output of the process and an enterprise is a physical object (see Evidence Appendix, pages 76 - 79).

**Reason #2** The second reason the Examiner has failed to establish a *prima facie* case of indefiniteness is that the Examiner has failed to present any evidence that the claims are indefinite. The March 6, 2009 Office Action only contains conclusory statements that a) the use of "as required" is indefinite, b) the meaning of "outputting a database" is unclear and c) that is unclear that an organization is a physical object. The unsupported rejections also ignore the opinion of an individual with the requisite skill in the relevant arts (see Evidence Appendix, pages 76 – 79) that the meaning of the terms is clear.

**Reason #3** The third reason the Examiner has failed to establish a *prima facie* case of indefiniteness is that the Examiner has failed to consider the claims as a whole. In particular, independent claims 34, 44, 62, 135, 141, 145, 150, 155, 159 and 164 describe inventions that rely on a computer to implement a process for integrating data from a plurality of sources into an application database. The remainder of the rejected claims are dependent upon the independent claims. It would be obvious to anyone of average skill in the relevant arts that the integrated database produced by this process is the output of this process. As a result, no one of average skill in the relevant arts would be confused about the meaning of the term "output a database" (see Evidence Appendix, pages 76 – 79).

**Reason #4** The fourth reason the Examiner has failed to establish a *prima facie* case of indefiniteness is that the Examiner has failed to interpret the claims in light of the specification. In particular, independent claims 34, 44, 62, 135, 141, 145, 150, 155, 159 and 164 describe inventions that rely on a computer to implement a process for integrating data from a plurality of sources into an application database. As is well known to those of average skill in the art and as described in the specification, the exact steps required to transform data from different sources into an integrated database will vary depending upon the exact status of the data in the source

databases. Given these facts, no one of average skill in the relevant arts would be confused about the scope of the activities covered by the claim (see Evidence Appendix, pages 76 – 79).

**Reason #5** The fifth reason the Examiner has failed to establish a *prima facie* case of indefiniteness is that the rejected claims do not meet any of the well established criteria for indefiniteness. Specifically, the rejected claims do not: (1) recite a means-plus-function limitation without disclosing corresponding structure in the specification; (2) include a numeric limitation without disclosing which of multiple methods of measuring that number should be used; (3) contain a term that is completely dependent on a person's subjective opinion, and/or (4) contain a term does not have proper antecedent basis where such basis is not otherwise present by implication or the meaning is not reasonably ascertainable (*Halliburton Energy Services, Inc. v. M-I LLC*, 514 F.3d 1244, 1255, 85 USPQ2d 1663 (Fed. Cir. 2008) and *Halliburton*, 514 F.3d at 1246, 85 USPQ2d at 1658 (Citing *Biomedino, LLC v. Waters Techs. Corp.*, 490 F.3d 946, 950 (Fed. Cir, 2007).

**Reason #6** The sixth reason the Examiner has failed to establish a *prima facie* case of indefiniteness is the Examiner has failed to consider the teachings of the prior art. The terms used in the rejected claims have well recognized meanings, which allow the reader to infer the meaning of the entire phrase with reasonable confidence. *Bancorp Services, L.L.C. v. Hartford Life Ins. Co.*, 359 F.3d 1367, 1372, 69 USPQ2d 1996, 1999-2000 (Fed. Cir. 2004).

**Reason #7** As noted previously, another way the Appellant will respectfully traverse the §112 second paragraph rejections of the rejected claims is by noting that the assertions regarding the alleged indefiniteness of the claims are not in compliance with the requirements of the Administrative Procedures Act and are therefore moot. In *Dickinson v. Zurko*, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. The Appellant respectfully submits that discussion in the preceding paragraphs (Reason #1, #2, #3, #4, #5 and #6) clearly shows that the Examiner has failed to provide even a scintilla of evidence to support the allegation that the claims do not meet the requirements of §112 second paragraph and that as a result has failed to meet the substantial evidence standard.

The Appellant respectfully submits that the rejections in the March 6, 2009 Office Action also fail to pass the arbitrary and capricious test because the U.S.P.T.O. fact-finding has produced

substantial evidence that those authoring the claim rejections do not appear to have an ordinary or average level of skill in the pertinent arts required to author valid rejections for indefiniteness and because the use of the term "as required" has been found to be definite when incorporated in over 5,000 other patents. The documented pattern of arbitrarily and capriciously incorporating non-statutory rejections of the Appellant's claims for indefiniteness when the claims use the same terms used in allowed claims contained in large company patents can also be observed in the appeals for applications 09/761,670, 10/743,417, 10/750,792 and 11/278,419. The Appellant respectfully submits that the preceding discussion makes it clear that the March 6, 2009 Office Action has failed to meet the requirements of the APA and/or to establish a *prima facie* case that the rejected claims are indefinite.

## **8. Conclusion**

The Appellant notes that with respect to the prosecution of the instant application, it appears that the U.S.P.T.O. has not fully complied with the requirements set forth in the APA, 35 U.S.C. 3 and 35 U.S.C. 131. A valid patent application rejection requires substantial evidence (Gartside, 203 F.3d at 1312). As described in the preceding section, the March 6, 2009 Office Action does not contain any evidence that would support the rejection of a single claim. However, related appeals and the March 6, 2009 Office Action for the instant application do provide substantial evidence that: those authoring/signing the Office Action do not appear to understand any of the scientific and/or engineering principles applicable to the pertinent art, those authoring the Office Action do not adhere to any of the well established statutory requirements for authoring valid claim rejections, and that those authoring the Office Action appear to have based the claim rejections on the use of different legal standards than those used for the review and allowance of similar applications filed by larger companies.

For the reasons detailed above, the Appellant respectfully but forcefully contends that each claim is patentable. Therefore, reversal of all rejections is courteously solicited.

Respectfully submitted,  
Asset Trust, Inc.

/B.J. Bennett/

B.J. Bennett, President  
Dated: July 30, 2009

## **9. Claims Appendix**

34. A computer readable medium having sequences of instructions stored therein, which when executed cause the processor in a computer to perform a data preparation method, comprising: integrating data from a plurality of systems using xml and a common schema as required to transform said data into an integrated database and output said database where said data is representative of a physical object.
35. The computer readable medium of claim 34 where the physical object comprises an organization and the common schema includes an organization designation.
36. The computer readable medium of claim 35 wherein the designated organization is a single product, a group of products, a division, a company, a multi-company corporation or a value chain.
37. The computer readable medium of claim 34 where the common schema is statistically valid and includes a data structure.
38. The computer readable medium of claim 37 where the data structure is a hierarchy.
39. The computer readable medium of claim 34 where the common schema includes a data dictionary.
40. The computer readable medium of claim 39 where the data dictionary defines standard data attributes from the group consisting of account numbers, components of value, currencies, elements of value, units of measure and time periods.
41. The computer readable medium of claim 34 where data are obtained from a plurality of systems selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, intellectual property management systems, process management systems, vendor management systems, operation management systems, sales management systems, human resource systems, accounts receivable systems,

accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems, purchasing systems and combinations thereof.

42. The computer readable medium of claim 34 wherein at least a portion of the data are from the Internet or an external database.

43. The computer readable medium of claim 34 where the data preparation method further comprises converting data to match a common schema and storing the converted data in a central database.

44. A computer implemented data preparation method, comprising: integrating data representative of a physical object or substance from a plurality of systems using xml and a common schema as required to transform said data into an integrated database that stores data in accordance with said schema and output said database.

45. The method of claim 44 where the physical object or substance comprises an organization and the common schema includes an organization designation and data structure.

46. The method of claim 45 wherein the designated organization is a single product, a group of products, a division, a company, a multi-company corporation or a value chain.

47. The method of claim 44 where the common schema includes a data dictionary.

48. The method of claim 47 where the data dictionary defines standard data attributes from the group consisting of account numbers, components of value, currencies, elements of value, units of measure and time periods.

49. The method of claim 44 where data are obtained from a plurality of systems selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, intellectual property management systems, process management systems, vendor management systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts

payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems and purchasing systems.

50. The method of claim 44 wherein at least a portion of the data are from the Internet or external databases.

51. The method of claim 44 where the data preparation method further comprises converting and storing data in accordance with a common schema.

52. A computer readable medium having sequences of instructions stored therein, which when executed cause the processors in a plurality of computers connected via a network to perform the data preparation method of claim 44.

62. A computer readable medium having sequences of instructions stored therein, which when executed cause the processors in a plurality of computers that have been connected via a network to perform an organization management method, comprising:

transforming data representative of an organization from a plurality of systems into an integrated database that stores data in accordance with an xml metadata standard and a common schema, and

using at least a portion of said data to create and output one or more tools for organization management

where the one or more tools for organization management further comprise a system for automated trading of an organization equity security based on a calculated market sentiment value and one or more tools selected from the group consisting of analytical models, category of value models, component of value models, market value models, network models, optimization models, simulation models, value chain models, management reports, lists of changes that will optimize one or more aspects of organization financial performance and combinations thereof.

63. The computer readable medium of claim 62 where the one or more tools are made available for review using an electronic display, a paper document or combinations thereof.

64. The computer readable medium of claim 62 where data are obtained from a plurality of systems selected from the group consisting of advanced financial systems, basic financial

systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, estimating systems, intellectual property management systems, process management systems, supply chain management systems, vendor management systems, operation management systems, enterprise resource planning systems (ERP), material requirement planning systems (MRP), quality control systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems, purchasing systems, web site systems, the Internet, external databases, user input and combinations thereof.

68. The computer readable medium of claim 62, where the common schema defines common attributes selected from the group consisting of data structure, organization designation, data dictionary and combinations thereof.

69. The computer readable medium of claim 68 where the data dictionary defines standard data attributes from the group consisting of account numbers, components of value, currencies, elements of value, organization designations, time periods and units of measure.

70. The computer readable medium of claim 68 where the data structure is a hierarchy.

90. The computer readable medium of claim 62, wherein the one or more aspects of organization financial performance are selected from the group consisting of organization revenue, organization expense, organization capital change, organization current operation value, organization real option value, organization market sentiment value, organization market value and combinations thereof.

91. The computer readable medium of claim 62, wherein the identified changes are changes to alliance value drivers, brand value drivers, channel value drivers, customer value drivers, customer relationship value drivers, employee value drivers, equipment value drivers, intellectual property value drivers, partnership value drivers, process value drivers, production equipment value drivers, vendor value drivers, vendor relationship value drivers, organization equity and combinations thereof.

134. The computer readable medium of claim 62 that learns the relative importance of the different elements of value, categories of value and enterprises in determining organization financial performance as required to support the development of one or more tools for organization management.

135. A data preparation system, comprising:

a computer with a processor having circuitry to execute instructions; a storage device available to said processor with sequences of instructions stored therein, which when executed cause the processor to:

integrate a plurality of data representative of an organization that physically exists from a plurality of organization related systems and an Internet using xml and a common schema as required to transform said data into an integrated database that stores data in accordance with said schema and output said database.

136. The system of claim 135, wherein storing said data in an integrated database for use in processing further comprises using metadata mapping to convert and store data in accordance with a common schema using one or more schema defined categories.

137. The system of claim 135, wherein a common schema includes attributes selected from the group consisting of organization designation, data structure, metadata standard, data dictionary and combinations thereof.

138. The system of claim 137, wherein an organization designation further comprises a single product, a group of products, a division, a company, a multi-company corporation or a value chain.

139. The system of claim 137, wherein a common schema further comprises a data dictionary where the data dictionary defines standard data attributes selected from the group consisting of account numbers, components of value, currencies, elements of value, units of measure, time periods and combinations thereof.

140. The system of claim 135, wherein a plurality of organization related systems are database management systems for systems selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems,

customer relationship management systems, channel management systems, intellectual property management systems, process management systems, vendor management systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems, purchasing systems and combinations thereof.

141. A program storage device readable by machine, tangibly embodying a program of instructions executable by a machine to perform the method steps in a data processing method, comprising:

use metadata mapping to integrate a plurality of data representative of a physical object or substance from a plurality of systems in accordance with xml and a common schema to transform said data into an integrated database that stores data in accordance with said schema and output said database

where metadata mapping is guided by a metadata mapping table.

142. The program storage device of claim 141, wherein at least some data are pre-specified for integration.

143. The program storage device of claim 141, wherein the schema is statistically valid.

144. The program storage device of claim 141, wherein a set of integration and conversion rules are established using a metadata and conversion rules window and saved in a metadata mapping table.

145. A computer implemented data method, comprising using metadata mapping to integrate a plurality of data representative of an enterprise from a plurality of enterprise related systems in accordance with xml and a common schema as required to transform said data into an integrated database that stores data using one or more schema defined categories in accordance with said schema and output said database

where metadata mapping is guided by a metadata mapping table.

146. The method of claim 145, wherein a plurality of systems are selected from the group consisting of advanced financial systems, basic financial systems, alliance management

systems, brand management systems, customer relationship management systems, channel management systems, intellectual property management systems, process management systems, vendor management systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems, enterprise resource planning systems (ERP), material requirement planning systems (MRP), scheduling systems, supply chain systems, quality control systems, purchasing systems, risk management systems, the Internet and combinations thereof.

147. The method of claim 145, wherein a metadata and conversion rules window is used to establish a metadata mapping table and a conversion rules table.

148. The method of claim 145, wherein a common schema identifies data designations selected from the group consisting of components of value, sub components of value, known value drivers, elements of value, sub elements of value, non-relevant attributes and combinations thereof.

149. The method of claim 145, wherein a data method further comprises storing a plurality of converted data in one or more tables to support organization processing.

150. A data preparation system, comprising:

a computer with a processor having circuitry to execute instructions; a storage device available to said processor with sequences of instructions stored therein, which when executed cause the processor to:

use metadata mapping to integrate and convert a plurality of data from a plurality of enterprise related systems in accordance with xml and a common schema to as required to transform said data into an integrated database and output said database

where metadata mapping is guided by a metadata mapping table, and

where a plurality of enterprise related systems are selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, intellectual property management systems, process management systems, vendor management systems, operation management systems, sales

management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems, enterprise resource planning systems (ERP), material requirement planning systems (MRP), scheduling systems, supply chain systems, quality control systems, purchasing systems and combinations thereof.

151. The system of claim 150, wherein at least some data are pre-specified for integration and conversion.

152. The system of claim 150, wherein a metadata and conversion rules window is used to establish a metadata mapping table and a conversion rules table.

153. The system of claim 150, wherein a common schema identifies data designations selected from the group consisting of components of value, sub components of value, known value drivers, elements of value, sub elements of value, non-relevant attributes and combinations thereof.

154. The system of claim 150, wherein at least a portion of the data are obtained from an Internet or an external database.

155. A program storage device readable by machine, tangibly embodying a program of instructions executable by a machine to perform the method steps in a data processing method, comprising:

use metadata mapping to integrate a plurality of data representative of an enterprise from a plurality of enterprise related systems in accordance with XML and a common schema as required to transform said data into an integrated database that stores data using one or more schema defined categories in accordance with said schema and output said database  
where metadata mapping is guided by a metadata mapping table, and  
where a metadata and conversion rules window is used to establish a metadata mapping table.

156. The program storage device of claim 155, wherein at least some data are pre-specified for integration and conversion

157. The program storage device of claim 155, wherein a plurality of integrated enterprise data are stored in an application database in accordance with a common schema.

158. The program storage device of claim 155, wherein a plurality of enterprise related systems are selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, intellectual property management systems, process management systems, vendor management systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems, enterprise resource planning systems (ERP), material requirement planning systems (MRP), scheduling systems, supply chain systems, quality control systems, purchasing systems, risk management systems, the Internet and combinations thereof.

159. A computer implemented data method, comprising using metadata mapping to integrate a plurality of data representative of an enterprise that physically exists from a plurality of enterprise related systems in accordance with xml and a common schema as required to transform said data into an integrated database that stores data in accordance with said schema and output said database

where metadata mapping is guided by a metadata mapping table and where a metadata and conversion rules window is used to establish a metadata mapping table.

160. The method of claim 159, wherein a plurality of enterprise related systems are selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, intellectual property management systems, process management systems, vendor management systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems, enterprise resource planning systems (ERP), material requirement planning systems (MRP),

scheduling systems, supply chain systems, quality control systems, purchasing systems, risk management systems, the Internet and combinations thereof.

161. The method of claim 159, wherein a metadata and conversion rules window is used to establish a metadata mapping table and a conversion rules table.

162. The method of claim 159, wherein a common schema identifies data designations selected from the group consisting of components of value, sub components of value, known value drivers, elements of value, sub elements of value, non-relevant attributes and combinations thereof.

163. The method of claim 159, wherein a data method further comprises storing a plurality of converted data in one or more tables to support organization processing.

164. A data preparation system, comprising:

a computer with a processor having circuitry to execute instructions; a storage device available to said processor with sequences of instructions stored therein, which when executed cause the processor to:

use metadata mapping to integrate and convert a plurality of data representative of an enterprise that physically exists from a plurality of enterprise related systems in accordance with xml and a common schema to transform said data into an integrated database and output said database

where metadata mapping is guided by a metadata mapping table,

where a metadata and conversion rules window is used to establish a metadata mapping table, and

where a plurality of enterprise related systems are selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, intellectual property management systems, process management systems, vendor management systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems, enterprise resource planning systems (ERP), material requirement planning systems

(MRP), scheduling systems, supply chain systems, quality control systems, purchasing systems and combinations thereof.

165. The system of claim 164, wherein at least some data are pre-specified for integration and conversion.

166. The system of claim 164, wherein a common schema identifies data designations selected from the group consisting of components of value, sub components of value, known value drivers, elements of value, sub elements of value, non-relevant attributes and combinations thereof.

167. The system of claim 164, wherein at least a portion of the data are obtained from an Internet or an external database.

## **10. Evidence Appendix**

Page 69	excerpt from Halford reference received July 25, 2009
Pages 70 - 75	declaration under Rule 132 for 09/940,450 received October 31, 2008
Pages 76 - 79	declaration under Rule 132 for 09/764,068 received May 4, 2009
Pages 81 - 83	declaration under Rule 132 for 10/743,616 received October 17, 2008
Pages 84 - 85	declaration under Rule 132 for 10/287,586 received October 17, 2008
Pages 86 – 87	Zweig reference received July 25, 2009

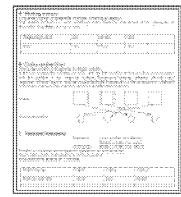
[Summary](#)[References](#)[Top](#)[Abstract](#)[Working memory and reasoning](#)[Working memory capacity](#)[Measuring complex chunks](#)[Central capacity](#)[Chunk capacity and chunk size limits](#)[Links between working memory and reasoning](#)[Complexity in reasoning](#)[Method for Analysis of Relational Complexity \(MARC\)](#)[Summary](#)[References](#)

## Working memory and reasoning

Developments in both theory and methodology have strengthened the links between WM and reasoning and some salient points are summarised in Box 1. We propose that the essential link between WM and reasoning is in the common requirement to bind elements to a coordinate system. Consider first short-term serial recall of the words, "Fido, Rover, Cleo". The words are assigned to ordinal positions when presented ([Figure 1A](#)), but this assignment must be maintained for later recall, and this requires attention. Even in free recall (not shown), items on a trial must be bound to the present-trial concept or node in memory; binding may be even more extensive inasmuch as an associative network between items would greatly aid in recall. Now consider a choice reaction time task where participants press a different button in response to one of several lights, and the buttons are assigned to lights randomly (non-compatible mappings, [Figure 1B](#)). Maintaining bindings of button positions to light positions in WM requires attention [1]. Finally, consider a transitive inference problem such as "Jane is taller than Wendy, Amelia is taller than Jane".

### **Box 1. Capacity effects in working memory (WM) and reasoning**

- The core of WM is the temporary binding of elements to a coordinate system [5, 6] which is closely related to relational representations used in reasoning [4, 1]. Temporary binding to structural representations possibly accounts for the strong relationship between WM capacity and reasoning and fluid intelligence (Gf) [1].
- Capacity limits in both WM and reasoning can be attributed to the number of bindings to slots in a coordinate system or relation. WM is limited to approximately four items that can be kept active [7], while representations in reasoning are limited to four interrelated variables [8].
- Latent variable constructs of WM capacity account for approximately .60 of the variance in reasoning and Gf [2].
- WM has a domain-general component that is critical to its prediction of reasoning and Gf [2].
- New assessments of WM capacity measure how many elements fit in the focus of attention [3] or capacity-limited region [9] more explicitly than traditional sentence and operation spans. These include: Computer-paced reading of numbers, or performing simple operations of +1 or -1, while retaining words or letters for later recall [10]; or presentations too rapid and unpredictable to allow rehearsal [3].

**Figure 1**

Binding of elements into coordinate systems in (A) working memory (B) choice reaction time, and (C) reasoning.

This can be solved by mapping premise elements into an ordering schema as shown in [Figure 1C](#).

Maintaining bindings between elements and slots using attention is common to WM and to reasoning. This is not the only common factor, but there is substantial evidence that working memory capacity (WMC) accounts for a sizeable proportion of the variance in reasoning [1, 2] and intelligence [3]. WM and reasoning differ in whether the binding is supplied with the input (as in short-term serial recall) or has to be constructed by the reasoner, as in syllogistic (including transitive) inference, where premise elements have to be mapped to slots in a mental model in a way

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Serial No.: 09/940,450

Applicant: Jeff S. Eder

Filed: August 29, 2001

Examiner: Jennifer Liversedge

Art Unit: 3692

Docket No.: AR - 23

Customer No: 53787

**DECLARATION UNDER RULE 132**

I, Gregory M. Cusanza, do hereby declare and say: my home address is 8604 233<sup>rd</sup> Place NE, Redmond, WA 98053 and I have a B.S. degree in computer science from Cal Poly San Luis Obispo.

I have worked in the data processing field for 16 years, concentrating in the disciplines of data storage, data conversion and enterprise processing. I also have extensive knowledge of computer system administration, particularly for Windows, Linux, and Unix systems. I have been employed by a corporation that was recently purchased by EMC for 12 years, Knacta for 1.5 years and Kantrak, Inc. for the seven months. I own 5% of the issued common stock in Kantrak, Inc.

I further declare that I do not have any direct affiliation with the application owner, Asset Reliance, Inc. I first met the inventor in April of 2004. I joined Kantrak, a company run by the inventor in February 2008. Knacta was also run by the inventor. Kantrak has a license to the intellectual property associated with this application.

On March 24, 2008, I was given a copy of U.S. Patent Application 10/645,099 filed in the United States Patent Office on March 16, 2002. Until that time I had not read the patent application although I had previously read U.S. Patent Application 10/441,385 which is similar. U.S. Patent Application 09/940,450 is the parent of application 10/645,009 and as such has the same specification and drawings. I have studied the entire specification in order to closely analyze the claims and drawings. I am familiar with the language of the claims and conversant with the scope thereof. I understand the invention as claimed.

On October 2, 2008 I was given a copy of U.S. Patent 6,549,922 by Srivastava et al (hereinafter, Srivastava) that is entitled "System for collecting, transforming and managing media metadata" and a copy of U.S. Patent 7,249,328 by Russell T. Davis (hereinafter, Davis) that is entitled "Tree view for reusable data markup language". Until that time I had not read either of these patents and I have not discussed them with anyone.

Davis describes a method and system that copies data from a data source into an RDML document (102). All RDML documents (102) created by the Davis invention use a common xml 1.0 compliant data type definition (hereinafter, dtd) that is described in FIG. 9 and in column 21, line 25 through column 30, line 8 of the specification. The data in an RDML document (102) can be manipulated and formatted by a combined data viewer/analytical program/platform, the RDML data viewer (100), for different "views" (108, Column 9, lines 1 – 36, Column 16, lines 1 - 3). The different "views" (108) supported by the RDML data viewer (100) include charts (716); a tree view (718); spreadsheets (720); footnote display (722); documentation, reports, applications and/or export in a file as shown in FIG. 1 and FIG. 3.

RDML documents (102) are first created from existing data sources (230) using the RDML formatter (216). The RDML formatter (216) is limited to creating RDML documents from a single table or flat file (column 17, lines 51 – 53). If the data being provided is not in a single table or flat file, then a single table needs to be created using a query or some other technique before an RDML document can be created. The RDML formatter 216 is an application that assists a user in selecting the proper documentation tags, saves the tags in a separate database (the RDML image database 226), and creates the actual RDML document (102, column 18, lines 2 – 6). As part of this processing "the formatter 216 inserts a table 504 that holds information regarding the data tables into the data source database 230 for later reference.... The RDML image database 226 contains documentation that relates to a separate

set of data records in the existing database 230.....The image database 226 contains a list of RDML documents 102 that it can produce. The original data may be in flat files, relational tables, or a table that results from a query on a relational database (line 3, column 18 through line58, column 18). The RDML data viewer (100) has the ability combine documents from different sources (column 28, line 33).

RDML documents (102), created by the formatter (216) may be served from disk based text files (column 18, lines 18 and 19) or they may be created dynamically using the RDML data server (218). The RDML data server (218) sits between the data source (230) and the RDML data viewer (100). In response to a request for an RDML document (102) from the data viewer, the RDML data server (218) queries the data source (230) to retrieve the required information. The retrieved information is then combined with the document definition from the image database (226) to create an RDML document that is transmitted to the RDML data viewer.

The data from the RDML documents (102) that are being used in a view (108) are managed by the RDML data viewer (100) in a number of unique ways as shown in FIG. 7A and as discussed below:

1. the basic unit for the manipulation, storage and display of data is an “RDML line item” (1304, see Column 9, line 25), an RDML line item (1304) is similar to a row in a relational database;
2. the primary data store (712) stores RDML doc objects (1302) and RDML line items (1304) as shown in FIG. 13.
  - a) An RDML doc object (1302) is a full internal representation of the RDML document (102). It contains as its central attribute the tree-structured data elements contained in the document's original tags and implements the DOM interface (Column 34, lines 43 – 47).
  - b) Similar to the RDML doc objects (1302), the RDML line items (1304) are objects that provide high-level methods for retrieving data on a line item, any associated links or notes, and the attributes.
  - c) The views (108) of the RDML data viewer (100) work with RDML docs (1302) and RDML line items (1304) in the primary date store (712) to create their presentations. (Column 35, lines 63 through 65).

Srivastava describes a method and system for extracting metadata from media files, summarizing the extracted metadata in a standardized format such as XML and mapping the

summaries to a selected database schema. The mappings are then used to guide the upload of the summaries and the media files into a database. The database mapper 123 maps the elements of the XML "documents" which contain the logical annotation metadata into the corresponding schema used by the database for storing, indexing, searching and managing the media and its metadata. The physical properties captured in a logical annotation are mapped into the fields of a database object. In addition, the XML representation, which includes content attributes obtained by the content processor 115, may also be stored within the database object. In addition to allowing the media source file to be stored with the metadata, a pointer to (the URL of) the media resource may be stored instead when it does not make sense for the whole media source to be stored. As a result, a self-contained repository, for the media data and its description, is created in the database. This repository can now be indexed with conventional indexing techniques, enabling advanced searches on the multimedia data (Column 8, line 36 – 53).

Based on my experience and education in the field of data storage, data conversion and enterprise processing, I have concluded that U.S. Patent 6,549,922 (hereinafter, Srivastava) and U.S. Patent 7,249,328 (hereinafter, Davis or the Davis invention) are relevant to the data integration invention described in patent application 09/940,450 only to the extent that they provide additional evidence of novelty of the claimed invention. There are several reasons for this:

1. Patent application 09/940,450 describes a method and system for integrating data from a plurality of systems using xml and a common schema. The Davis invention teaches away from this approach by teaching method and system for copying a table from a single system to an an xml 1.0 compliant dtd.
2. Patent application 09/940,450 describes a method and system for creating an integrated database to support organization processing. The Davis invention teaches away from this approach by teaching method and system for creating documents that can only be viewed and manipulated by a special application – a combined data viewer and analysis program – the RDML data viewer.
3. Patent application 09/940,450 describes a method and system for creating an integrated database using xml and a common schema to support organization processing. The Davis invention teaches away from this approach by teaching the separate storage of data and the

information needed to convert said data to a common format. In particular, the Davis invention teaches method that leaves the original data in the source database and stores the information that defines the conversion to a format that adheres to a common xml 1.0 compliant dtd in a separate database, the RDML image database.

4. Patent application 09/940,450 describes a method and system for creating an integrated database using data from a plurality of systems in accordance with xml and a common schema. The Davis invention teaches away from this approach by teaching a method and system for copying a table from a single system to an RDML document (102) that uses an xml 1.0 compliant dtd. The RDML data viewer (100) has the ability to combine RDML documents that use data from different systems using a user defined view (108) for manipulation and output. However, the Davis specification does not teach or suggest creating an integrated database from the combined data.

5. Patent application 09/940,450 describes a method and system for creating an integrated database that utilizes a common schema for data storage to support organization processing. The Davis invention teaches away from this approach by teaching a method and system for storing data by “RDML document” and “RDML line item” that is optimized for making presentations and creating graphs.

6. Patent application 09/940,450 describes a method and system for creating an integrated database with data from a plurality of systems. Combining items 4 and 5, the Davis invention teaches copying a table from a single system to an RDML document and storing the data by “RDML line item”. Given these features, any output file produced by the Davis system would require additional processing to enable data storage at the cell level (for example an individual month within a time series) in accordance with a common schema – additional processing that is not taught or suggested by the Davis invention specification. Data storage at the cell level enables processing of the data by applications other than the RDML data viewer.

7. Patent application 09/940,450 describes a method and system for creating an integrated database and manipulating the data in the integrated database using separate applications. The Davis invention teaches away from this approach by using an RDML data viewer (100) to both combine and manipulate RDML documents.

8. Patent application 09/940,450 describes a method and system for using metadata mapping to integrate data from a plurality of systems in accordance with xml and a common schema.

The Davis invention teaches away from this approach by teaching the use of an RDML formatter 216 that assists a user in selecting the proper documentation tags without using metadata mapping.

9. Patent application 09/940,450 describes a method and system for mapping conversions for database metadata from a plurality of sources to a central database metadata with a metadata and conversion rules window. Srivastava teaches away from this approach by teaching the mapping of extracted and summarized media metadata to a schema followed by the subsequent storage of the media and summarized metadata in the database. Srivastava uses the metadata summary as annotations to enable search for media files, application 09/940,450 uses metadata mapping to guide the conversion of data from one metadata standard to another as part of the process of creating an integrated database.

10. As discussed in items 1 through 9, Davis and Srivastava teach away from almost every aspect of the data integration invention described in application 09/940,450. Given these facts, it is unsurprising that a combination of the teachings of the two patents does not render any aspect of the invention described in application 09/940,450 obvious.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Signed,



10-30-2008

Gregory M. Cusanza

Date: October 30, 2008

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Serial No.: 09/764,068

Applicant: Jeff S. Eder

Filed: January 19, 2001

Examiner: Jennifer Liversedge

Art Unit: 3692

Docket No.: AR - 19

Customer No: 53787

**DECLARATION UNDER RULE 132**

I, Gregory Cusanza, do hereby declare and say: my home address is 8604 233<sup>rd</sup> Place NE, Redmond, WA 98053 and I have a B.S. degree in computer science from Cal Poly San Luis Obispo.

I have worked in the data processing field for 16 years, concentrating in the disciplines of data storage, data conversion and enterprise processing. I also have extensive knowledge of computer system administration, particularly for Windows, Linux, and Unix systems. I have been employed by a corporation that was recently purchased by EMC for 12 years, Knacta for 1.5 years and Kantrak, Inc. for the seven months. I own 5% of the issued common stock in Kantrak, Inc.

I further declare that I do not have any direct affiliation with the application owner, Asset Reliance, Inc. I first met the inventor in April of 2004. I joined Kantrak, a company run by the inventor in February 2008. Knacta was also run by the inventor. Kantrak has a license to the intellectual property associated with this application.

On August 30, 2007, I was given a copy of U.S. Patent Application 10/441,385 filed in the United States Patent Office on May 20, 2003. U.S. Patent Application 09/764,068 is the parent of application 10/645,009 and as such has the same specification and drawings. I have studied the entire specification in order to closely analyze the claims and drawings. I am familiar with the language of the claims and conversant with the scope thereof. I understand the invention as claimed.

On October 2, 2008 I was given a copy of U.S. Patent 6,549,922 by Srivastava et al (hereinafter, Srivastava) that is entitled "System for collecting, transforming and managing media metadata" and a copy of U.S. Patent 7,249,328 by Russell T. Davis (hereinafter, Davis) that is entitled "Tree view for reusable data markup language". Until that time I had not read either of these patents and I have not discussed them with anyone.

Based on my experience and education in the field of data storage, data conversion and enterprise processing, I have concluded that:

1. U.S. Patent Application 09/764,068 describes a process for integrating data into an application database and the database can properly be called an integrated database;
2. U.S. Patent Application 09/764,068 describes a process for integrating data into an application database. It would be obvious to anyone of average skill in the art that the integrated database produced by this process is the output of this process; and
3. U.S. Patent Application 09/764,068 describes a process for transforming data from disparate systems into an integrated application database and anyone of average skill in the art of data processing who read the specification would fully understand the scope of the activities associated with the transformation.

I have also attached a drawing that graphically illustrates the difference between the data integration invention described in U.S. Patent Application 09/764,068 and the Davis invention.

Finally, I will reiterate that Srivastava uses the term "metadata mapping" to describe the process of matching a summary description for a file derived from metadata for the file to a schema. 09/764,068 uses the term "metadata mapping" to describe the process of mapping from source database metadata to application database metadata. In other words, Srivastava teaches away from the meaning of metadata mapping disclosed in 09/764,068.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Signed,

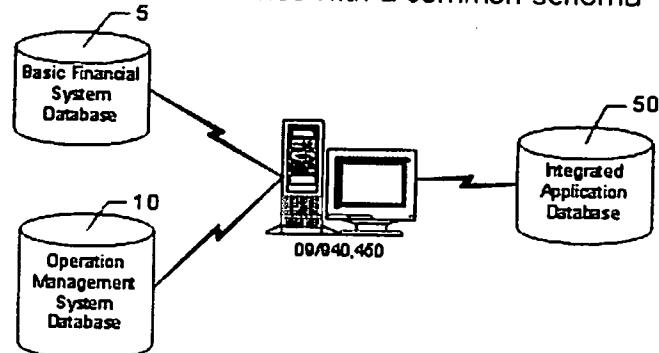


4.28 - 2009

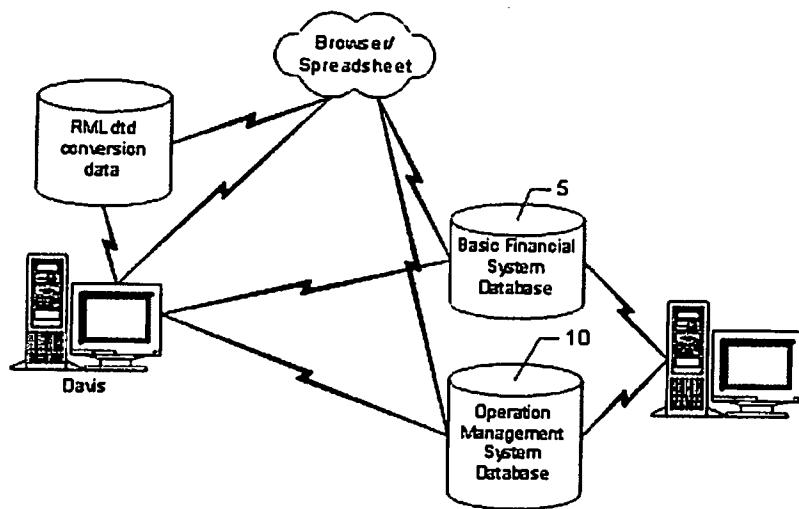
Gregory Cusanza

Date: April 28, 2009

Maps and converts source data to an integrated database in accordance with a common schema



Combines source data and conversion information in an application to produce a graph/presentation



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Serial No.: 10/743,616

Applicant: Jeff S. Eder

Filed: March 16, 2002

Examiner: Jennifer Liversedge

Art Unit: 3692

Docket No.: AR - 61

Customer No: 53787

**DECLARATION UNDER RULE 132**

I, Dr. Peter Brous, do hereby declare and say:

My home address is 17221 NE 8th Street, Bellevue, WA 98008. I have a B.S. degree in Finance from the University of Connecticut and a PhD in Finance from the University of Oregon.

I have worked in the finance field for 26 years, concentrating in the areas of corporate performance measures, business valuation, capital budgeting, and real option analysis. I have been a professor of finance at Albers School of Business and Economics at Seattle University for 16 years and was recently honored to hold the Dr. Khalil Dibee Endowed Chair.

I further declare that I do not have any direct affiliation with the application owner, Asset Reliance, Inc or its licensee Kantrak, Inc. I previously met the inventor, who is now the President of Kantrak, Inc. briefly on October 16, 2007.

On October 25, 2007, I was given a copy of U.S. Patent Application 10/743,616 entitled "A performance management platform" filed in the United States Patent Office on March 16, 2002. Until that time I had not read the patent application. I have studied the entire specification in order to closely analyze the claims and drawings. I am familiar with the language of the claims and conversant with the scope thereof. I understand the invention as claimed.

On September 29, 2008 I was given a copy of "the 1986-1988 Stock Market Investor Sentiment or Fundamentals", by Michael N. Baur, Socorro Quintero and Eric Stevensi published in Managerial and Decision Economics, Vol. 17, No. 3 (May - Jun., 1996). Until that time I had not read the article or discussed it with anyone. However, I have read many articles on the subject of market value and market sentiment. I have a strong understanding of the concepts of market value and market sentiment and have been teaching these concepts for over 10 years. I have studied the entire article and I am totally familiar with the language of the article with the scope thereof.

Based on my experience and education in the field of finance, I have concluded that the article by Baur et al. (hereinafter, the Baur article) has no relevance to the market sentiment calculation and analysis described in patent application 10/743,616. There are several reasons for this.

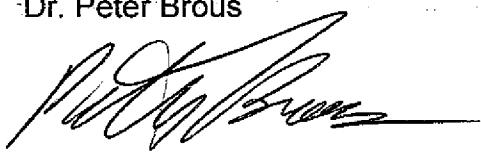
1. Patent application 10/743,616 describes a method for calculating and analyzing market sentiment for a single firm. The Baur article describes an attempt to determine if investor sentiment related to the market as a whole had an effect on changes in prices for the S&P 500 as a whole during the period from 1986-1988;
2. Patent application 10/743,616 defines market sentiment for a single firm as the difference between the market value of firm's equity and debt and the value of the firm's current operation, real options, excess financial assets and derivatives. The Baur article does not analyze the difference the market value of S&P 500's equity and debt

and the value of the S&P 500's current operation, real options, excess financial assets and derivatives as it only attempts to analyze changes in prices;

3. Patent application 10/743,616 teaches the analysis of the market sentiment level calculated for a firm using the method described in item 2 in order to identify the elements of value and/or external factors that contribute to the calculated levels. The Baur article does not teach or suggest anything about identifying the elements of value and/or external factors that contribute to market sentiment or investor sentiment;
4. Patent application 10/743,616 describes a method for calculating and analyzing market sentiment for a single firm at a specific point in time. The Baur article describes an attempt to determine if changes in investor sentiment related to the market as a whole affects weekly changes in prices for the S&P 500 as a whole over a period of several years;
5. The Baur article cannot be used to make any inferences about investor sentiment (or market sentiment) at the firm level because increases in investor sentiment for some firms in the S&P 500 could offset decreases in investor sentiment for other firms within the S&P 500 over the time period being analyzed;
6. Patent application 10/743,616 does not teach or suggest anything about identifying a proxy for market sentiment for the market as a whole. The Baur article relies on an assumption that a measure of the change in the discount percentage on closed end funds is a proxy for investor sentiment related to the market as a whole. The Baur article also acknowledges that changes in closed end fund discounts may not be the correct proxy for measuring general investor sentiment;
7. The only conclusion that can reasonably be drawn from the Baur article is that the assumed proxy for general investor sentiment (described in item 6) did not have a significant statistical relationship to the observed price changes for the S&P 500 between 1986 and 1988.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Dr. Peter Brous

A handwritten signature in black ink, appearing to read "Peter Brous".

Date: October 17, 2008

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Serial No.: 10/287,586

Applicant: Jeff S. Eder

Filed: March 16, 2002

Examiner: Yehdeggga Retta

Art Unit: 3693

Docket No.: AR - 38

Customer No: 53787

**DECLARATION UNDER RULE 132**

I, Dr. Peter Brous, do hereby declare and say:

My home address is 17221 NE 8th Street, Bellevue, WA 98008. I have a B.S. degree in Finance from the University of Connecticut and a PhD in Finance from the University of Oregon.

I have worked in the finance field for 25 years, concentrating in the areas of corporate performance measures, business valuation, capital budgeting, and real option analysis. I have been a professor of finance at Albers School of Business and Economics at Seattle University for 15 years and was recently honored to hold the Dr. Khalil Dibee Endowed Chair.

I further declare that I do not have any direct affiliation with the application owner, Asset Reliance, Inc or its licensee Kantrak, Inc. I met the inventor, the President of Kantrak, Inc. for the first time on October 16, 2007.

On October 25, 2007 I was given a copy of "How to sort out the premium drivers of post deal value", by Daniel Bielinski published in Mergers and Acquisitions in July of 1993. Until that time I had not read the article. However, I have read many articles on the subject of Value Based Management. I have a strong understanding of the concept and practice of Value Based Management and have been teaching this concept for over 10 years. I have studied the entire article and I am totally familiar with the language of the article with the scope thereof.

Based on my experience and education in the field of finance, I have concluded that the Bielinski article and Value Based Management does not inherently describe or enable:

- a) the development of a computational model of the current operation segment of value by element of value where the elements of value are selected from the group consisting of alliances, brands, channels, customers, customer relationships, employees, employee relationships, intellectual capital, intellectual property, partnerships, processes, production equipment, vendors and vendor relationships, or
- b) the analysis of segments of value such as real options, market sentiment and/or derivatives.

There are several reasons for this:

1. As stated in the article VBM is similar to SVA. One of the ways it is similar is that it focuses on "value drivers" such as profit margin and growth instead of intangible assets as part of a tree based analysis of cash flow. Unlike SVA, VBM includes operational value drivers that drive the value drivers. However, these are generally not intangible elements of value. For example, Bielinski provides an example of breaking down profit margin by looking more closely at the cost of materials;
2. VBM is also similar to SVA in that it relies on the efficient market theory and this precludes the analysis of market sentiment;
3. SVA and VBM are tools that focus on the standard valuation model, the discounted cash flow model, that does not even consider the value associated with flexibility or decision making that is done sequentially and conditionally based on the arrival of new information. The valuation of this flexibility is the basis for valuation using real option analysis; and
4. Neither VBM or SVA address the valuation of derivatives.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Signed,



Dr. Peter Brous

Date: July 21, 2008

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## THE WALL STREET JOURNAL.

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THE INTELLIGENT INVESTOR | JULY 11, 2009

# Does Stock-Market Data Really Go Back 200 Years?

By JASON ZWEIG



As of June 30, U.S. stocks have underperformed long-term Treasury bonds for the past five, 10, 15, 20 and 25 years.

Still, brokers and financial planners keep reminding us, there's almost never been a 30-year period since 1802 when stocks have underperformed bonds.

These true believers rely on the gospel of "Stocks for the Long Run," the book by finance professor Jeremy Siegel of the Wharton School at the University of Pennsylvania that was first published in 1994.

Using data assembled by other scholars, Prof. Siegel extended the history of U.S. stock returns all the way back to 1802. He came to two conclusions that became articles of faith to millions of investors: Ever since Thomas Jefferson was in the White House, stocks have generated a "remarkably constant" average return of nearly 7% a year after inflation. (Adding inflation at 3% yields the commonly cited 10% annual stock return.) And, declared Prof. Siegel, "the risks of holding stocks decrease over time."

There is just one problem with tracing stock performance all the way back to 1802: It isn't really valid.

Prof. Siegel based his early numbers on data first gathered decades ago by two economists, Walter Buckingham Smith and Arthur Harrison Cole.

For the years 1802 through 1820, Profs. Smith and Cole collected prices on three dozen banking, insurance, transportation and other stocks -- but ended up including only seven, all banks, in their stock-market index. Through 1845, they tracked 19 insurance stocks, but rejected 95% of them, adding only one to their index. For 1834 onward, they added a maximum of 27 railroad stocks.

To be a good measure of stock returns, an index should be comprehensive (by including many stocks) and representative (by including the stocks commonly held by investors). The Smith and Cole indexes are neither, as the professors signaled in their 1935 book, "Fluctuations in American Business." They cherry-picked their indexes by throwing out any stock that didn't survive for the whole period, whose share prices were too hard to find or whose returns seemed "inflexible," "erratic," or "non-typical."

The database of early U.S. securities at EH.net has so far identified more than 1,000 stocks that were listed on 10 different exchanges -- including Charleston, S.C., New Orleans, and Norfolk, Va. -- between 1790 and 1860. Thus the indexes relied on by Prof. Siegel exclude 97% of all the stocks that existed in the earliest years of the U.S. market, and include only the bluest of the blue-chip survivors. Never mind all of the canals, wooden turnpikes, rubber-hat companies and the other doomed stocks that investors lost millions on -- and whose returns may

never be reconstructed.

There is a second problem with Prof. Siegel's data.

In an article published in 1992, he estimated the average annual dividend yield from 1802-1870 at 5.0%. Two years later in his book, it had grown to 6.4% -- raising the average annual return in the early years from 5.7% to 7.0% after inflation.

Why does that matter? By using the higher number for the earlier period, Prof. Siegel appears to have raised his estimate of the rate of return for the entire period by about half a percentage point annually.

Prof. Siegel calculated in his 1992 article that \$1 invested in stocks in 1802 would have grown, after inflation, to \$86,100 by 1990. In his book just two years later, however, he estimated that \$1 in 1802 would have mushroomed into \$260,000 by 1992. But in 1991 and 1992, stocks gained 30.5% and 7.6%, respectively, which should have taken the cumulative return up to only about \$121,000. Nearly all of that huge difference seems to have come from Prof. Siegel's revised number for early dividends.

"I made an estimate of the dividend yield," Prof. Siegel told me, "through looking at a smaller set of securities and projecting it out." Money manager Robert Arnott of Research Affiliates LLC has recently estimated the early dividend yield at 5.2%. "Arnott has a much lower estimate, and that's a big difference," said Prof. Siegel. "I mean, I don't know what more to say."

I later called Prof. Siegel to ask him again about the difference between his original research and his book, but he didn't get back to me by press time.

What, then, are the odds that stocks will continue to lag behind bonds for the long run? The sad truth is that history can't tell us the answer. The 1802-to-1870 stock indexes are rotten with methodological flaws. So we have only the period since then, or four distinct and complete 30-year stretches of stock returns, to base our long-term investment decisions on.

Another emperor of the late bull market, it seems, has turned out to have no clothes.

**Write to** Jason Zweig at [intelligentinvestor@wsj.com](mailto:intelligentinvestor@wsj.com)

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**11. Related Proceedings Appendix - None**